The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 802.---Vol. XXI.] LONDON, SATURDAY, JANUARY 4, 1851. [Price 6d.

CALLINGTON MINES, Cornwall—FORFEITED SHARES FOR ABSOLUTE SALE, *Pursuant to the Rules of the Company.*

MR. C. WARTON is directed peremptorily to SELL, BY AUCTION, at his offices, No. 38, Threadneedle-street, near the Bank of England, on Tuesday, the 7th of January, 1851, at Twelve for One o'clock precisely, 1

FIVE FORFEITED SHARES

in the valuable MINES at CALLINGTON, upon which £28 per share have been paid.

Particulars may be had of Mr. C. Warton, auctioneer and estate agent, No. 38, Threadneedle-street, London.

WHIDDEN MINES.

MR. H. C. CREAGH will SELL, BY AUCTION, at the Golden Lion, ASHBURTON, in One Lot, without reserve, on Tuesday, the 7th of January, 1851, at One o'clock P. M. precisely, the SETTS comprising these celebrated TIN and COPPER MINES, with the valuable MACHINERY, including a superior WATER-WHEEL, 40 feet by 4½ feet breast—the MATERIALS, &c. 2

The leases have about 17 years unexpired; they are held on 1-15th dues, and favourable clauses.

Conditions of sale, &c., may be obtained by application to George Carew, Esq., solicitor, 22, Lincoln's Inn-fields, London; or to Messrs. Caunter, Palk, Creagh, and Co., mineral agents, Ashburton, Devon.

MINING SETT.—A MINING SETT in the EAST of CORNWALL, of which several practical Miners and a Geologist have given favourable and satisfactory reports, is ready to be GRANTED on the usual mining conditions to any respectable parties having capital at hand to work it. 3

FIVE WELL-DEFINED LODES have been traced through the sett, and the immediate outlay to lay open the mine is estimated at a comparatively small amount.

Particulars may be obtained from Mr. Colling, solicitor, Okehampton, Devon, or Capt. John Penrose, of the Devon Great Tincroft Mine, at Moretonhampstead, Devon.

*** None need apply who have not the means at hand to go to work, and reference as to respectability and responsibility will be required.

TO BE LET, OR SOLD, about SEVENTY-FOUR ACRES, statute measure, of valuable FREEHOLD COAL, comprising TWO BEDS, respectively 3 feet and 18 inches thick, situate in the north-east manufacturing district of LANCASHIRE, and within reach of a railway station by 1½ mile of ready-made roads. 4

There are excellent stone quarries contiguous to the estate.

If needed, a comfortable MANSION, suitable for a highly respectable family, with excellent STABLING and COACH-HOUSE, together with SIX or SEVEN ACRES of superior MEADOW and PASTURE LAND, may be rented with the above.

Applications to be addressed to J. Tolson White, mining engineer, Wakefield, from whom further particulars may be obtained.

Wakefield, Dec., 1850.

EXTENSIVE IRON-WORKS AND MINERAL LEASES FOR SALE, BY PRIVATE BARGAIN.—The BLAIR IRON-WORKS, belonging to the AYRSHIRE IRON COMPANY, situated in the parish of DALRY and county of AYR, consisting of TWO BLOWING ENGINES, FIVE BLAST-FURNACES, FOUNDRY, PIT ENGINES, and other requisite utensils for the furnaces and working the minerals, all in working order, besides nearly TWO HUNDRED WORKMEN'S HOUSES.

The extensive MINERAL FIELDS consist of BLACKBAND, IRONSTONE, COAL, LIMESTONE, and FIRE-CLAY, held under long leases, at moderate fixed rents and royalties, all in the immediate neighbourhood of the furnaces; and the works having a connection with the Ayrshire Railway, command great facilities for transit and shipping of the produce. There is a large STOCK of IRONSTONE on the ground, which may be had at a valuation, and considerable progress has been made in the

ERECTION OF MALLEABLE IRON-WORKS, 5

in connection with the furnaces, which may also be had.—The above are well worthy the attention of capitalists and parties in search of mineral fields.

For further information apply to Mr. Brown, 35, St. Vincent-place, Glasgow.

LANARKSHIRE.

VALUABLE COAL-FIELDS TO LET in the WISHAW ESTATE, near the junction of the Caledonian and Clydesdale Railway, within 14 miles of Glasgow, 5 miles of the great iron-works situated in the district of Coatbridge, and 1½ mile from the large malleable iron-work lately erected at Motherwell. 6

These coal-fields will be let for a term of years, in allotments averaging from 70 to 120 imperial acres each. Those now to be let consist of the four upper seams of excellent coal, which give a total thickness of about 23 feet, and the whole are workable at a very moderate depth from the surface.

For particulars apply to Mr. Donald Lindsey, accountant, 57, George-street, Edinburgh; Messrs. Dundas and Wilson, C.S., 16, St. Andrew-square, Edinburgh; or to Mr. James Miller, Wishaw, by Motherwell, who will show plans and measurements of the areas of the different lots, and also sections of the going coal-works in the same estate, and marching with those allotments and divisions now to be let.

WHEAL ARTHUR MINE—CALSTOCK, CORNWALL. In 2048 shares.—Deposit £1.

At a GENERAL MEETING of the adventurers in this MINE, held at the offices, 5, White Hart-court, Lombard-street, on the 24th ult., when, in consequence of the favourable reports of the workings of the mine rendering a smaller amount of capital necessary than was originally anticipated. 7

It was resolved,—That the undisposed of shares should be offered at £1 per share deposit, and that they should be first offered to the present shareholders, and the residue to the public.

Parties, therefore, who wish to take shares in this favourable undertaking, are requested to apply to Mr. Fenton, the secretary, at the above offices.

WHEAL CARPENTER MINE, in the TAVISTOCK DISTRICT.—At a GENERAL MEETING of adventurers, held at the Bedford Hotel, Tavistock, on Friday, the 20th day of December, 1850,

Mr. THOMAS NICHOLLS in the chair. 8

The minutes of the last meeting having been read, and the purser's account having been submitted, showing that after all the costs have been fully paid, there is a balance in favour of the company of £242 9s. 10d.,—it was resolved,

1. That this account be approved and copied in the Cost-book.

The reports of Capts. Dunstan and Samuel Seccombe, Mr. Jehu Hitchins, and Messrs. Smith and Hitchins having been read—

2. That the same, together with the reports of Capts. Key and Carpenter submitted to the last meeting, be received and copied into the Minute-book.

Messrs. Bridgman and Nicholls having reported that they had not met with a suitable steam-engine, and the report of Messrs. Smith and Hitchins having been considered—

3. That the recommendation of these gentlemen, to adopt water-power instead of steam, be approved, if upon strict investigation it be found that such power is not likely to fail in dry seasons; and that Messrs. Bridgman, Nicholls, and Matthews be appointed a committee to ascertain this, with full power to order the works necessary for this water-power, if their inquiry should be satisfactory, without waiting for another general meeting.

Capt. Key having reported that the old lobby was cleared and the water let down from the back of the lode, and that the new lobby for the engine-shaft is proceeding satisfactorily—

4. That this shaft be sunk as speedily as possible.

Mr. Browne, the manager of the Devon and Cornwall Bank, at Tavistock, having become a shareholder—

5. That the Devon and Cornwall Banking Company, at Tavistock, be appointed bankers of this company.

6. That the next general meeting of the adventurers shall be held on Friday, 31st Jan., 1851, and that the notice required by the rules of the company of the time and place of holding such meeting be given by the purser accordingly.

7. That these resolutions, with the reports of the several mine agents, be printed and sent to the adventurers, and also to the *Mining Journal*.

THOMAS NICHOLLS, *Chairman*.

The thanks of the meeting were given to Mr. Nicholls for his attention to the interests of the company, and for his conduct in the chair.

THE PATENT OFFICE, 18, GREAT GEORGE-STREET, WESTMINSTER.—All BUSINESS connected with the procuring of BRITISH and FOREIGN PATENTS and REGISTRATION OF DESIGNS, is under the direction of Messrs. WILSON and COOKE, Consulting Engineers.—"Hints to Inventors" to be had gratis, or application. Inventors assisted in ascertaining the novelty of their inventions, and in obtaining capitalists to carry them out.

THE LABORATORY, 9

Open to the use of Experimentalists for Patents or other purposes, is under the direction of Mr. MAUGHAM, formerly Lecturer at the Royal Adelaide Gallery.

ANALYSES and ASSAYS of all productions, Metallurgical and Manufacturing, and Investigations of every description suitable to the wants of Inventors, Patentees, Manufacturers, and persons interested in Mining Property.

SEWERAGE OF LONDON.—The ATTENTION of the COMMISSIONERS appointed to determine upon the MOST EFFICIENT MATERIAL for the CONSTRUCTION of the SEWERS OF LONDON, is particularly directed to the ASPHALTE OF SEYSSEL, which more than any other material is applicable to the CONSTRUCTING and INTERNAL COATING of BRICK CULVERTS and OTHER CHANNELS for DRAINAGE. 10

The experiments made by the Royal Artillery on the embrasures of Plymouth Citadel, constructed of Seyssel Asphalte Brickwork, under the orders of the Hon. Board of Ordnance, have fully proved the superiority, adhesiveness, and strength of Seyssel Asphalte over all other cementitious compositions. A printed account of these experiments can be had on application to I. FARRELL, Secretary,

Seyssel Asphalte Company—"Claridge's Patent"—Established 1838.

Note.—The application of the Asphalte of Seyssel is specially recommended by the Commissioners on the Fine Arts for covering the ground line of brickwork in marshy situations, and it has been suggested that it would be peculiarly applicable for covering the areas of closed grave yards, and for the construction of *catacombs*.

MR. JAMES CROFTS tenders his SERVICES to CAPITALISTS for the PURCHASE of BRITISH MINING SHARES, whether on a large or small scale; and will be happy to indicate such mines as present the greatest chance of permanent dividends, or ultimate success of the workings, either at the request of his correspondents, or in reply to specific inquiries. The utmost punctuality in attending to communications from the country may be relied upon; and by transacting business only FOR PRINCIPALS, Mr. Crofts hopes to establish an identity of interests between his friends and himself.

JUDICIOUS PURCHASES in ESTABLISHED DIVIDEND MINES will INSURE a HIGH RATE of INTEREST per annum, varying from 15 to 20 per cent. 11

MR. CROFTS HAS SPECIALLY FOR SALE—

Wheal Fortescue (20 shares)	Great Sheba Consols (10 shares)
Hennock (10 shares)	Pentire Glaze and Pentire United (50 shares)
Tincroft (20 shares)	Wheal Arthur, Calstock (100 shares)
South Tamar (40 shares)	Bedford United (10 shares)
East Tamar (4⅝ shares)	Lamheroge Wheal Maria (10 shares)
Wheal Harris (20 shares)	
Llynmalees (5 shares)	

MR. CROFTS issues a PRICE CURRENT of Mining Shares twice each week, which may be had on application.

Dated No. 4, King-street, Cheapside, January 3, 1851.

MR. EVAN HOPKINS, C.E., F.G.S., &c., CONSULTING MINING ENGINEER, 12

OFFICE, No. 13, AUSTINFRIARS, LONDON.

Mr. HOPKINS may be consulted daily by Noblemen, Gentlemen, and Capitalists, who have invested, or may wish to invest, their capital in MINES or MINERAL PROPERTIES, on all matters connected therewith (Home and Foreign).

This office is the only one of the kind in the kingdom. No dealings in shares—is independent—having no connection with any party.

To avoid abuses, it is requested that no notice will be taken of any representations respecting mines—be they *favourable* or *unfavourable*—without being authenticated.

The object is to see justice done to the capitalists and property, and consultations on questions connected with general science.

*** Every description of Mineral Property inspected and reported on—on the Continent as well as the United Kingdom, and distant capitalists may receive periodical advice.

N.B.—Being a responsible and confidential business, and having a very extensive connection, it becomes necessary to acquaint those who apply for reports, that they must be paid for on delivery, at his office, otherwise they cannot be attended to.

MINING, RAILWAY, AND AUCTION OFFICES, 52, *THREADNEEDLE-STREET, LONDON.*

Messrs. R. TREDINNICK & CO., in thanking their friends and the public for their patronage at the Sale of Mining and Railway Shares, on Wednesday last, hope, by strict attention to the interest of all parties, to receive a continuance of their support. 13

The NEXT SALE will be HELD on WEDNESDAY NEXT, the 8th day of January, 1851, and continued weekly.

Messrs. TREDINNICK & CO. request that all ORDERS of SHARES FOR SALE be FORWARDED to them not later than MONDAY, the 30th inst., so as to allow their insertion in the catalogues, issued on the day preceding their sale.

NAP DOWN CONSOLS SILVER-LEAD MINING COMPANY,—COMBMARTIN, NORTH DEVON.

OFFICES—No. 52, THREADNEEDLE-STREET, LONDON. 14

In 3000 shares, of £2 each.—Deposit £1.

CONDUCTED ON THE COST-BOOK SYSTEM.

BANKERS—Messrs. Masterman and Co., Lombard-street, London; and the National Provincial Bank of England, Barnstaple.

SECRETARY—Mr. James Lane, No. 80, Threadneedle-street.

The following are some of the advantages under which this Company will commence operations:—

1. The lodes have been laid open to such an extent, that returns may soon be made.

2. The works are in progress of clearing, and a splendid new combined cylinder steam-pumping engine, built by Sims, of 100-horse power, with an entire set of pumps, are ready for work.

3. Labour is plentiful and coals cheap, and there are smelting-works in full operation close to the mine.

This Company may be fairly stated as one of the finest opportunities ever presented to the notice of the public for engaging in a highly profitable undertaking, at a very moderate expenditure. An extraordinary and important discovery has recently been made by sloding on the back of the main lode—nearly 2 tons of silver-lead have been raised in blocks of from 1 to 8 cwts. each. The lode, at this depth, carries a fine gossan, rich in silver; and in the captain's report of the 25th November last, he says—"On Saturday last several pieces of solid ore were discovered in ground that has never been explored—the largest piece weighing 364 lbs., and is an exceedingly splendid specimen."

In addition to the rich deposit of lead and silver with which the mine is stored, there is likewise a copper lode, of a promising description, from 3 to 3½ feet wide.

Applications for shares to be made to Mr. Thos. Allsop, stock and sharebroker, No. 1, Royal Exchange-buildings, London; Mr. James Lane, secretary, at the offices of the Company; and William Thorne, Esq., Barnstaple, Devon; or of the following brokers:—J. Davies, 38, Tower-buildings, Liverpool; E. Speakman, Exchange-chambers, Manchester; C. Beardshaw, Leeds; J. Ironside, Sheffield; Messrs. T. W. Flint and Co., Hull; G. Trickett, Post-office Chambers, Plymouth—to whom all communications may be addressed, and of whom prospectuses and plans may be obtained.

UNITED MINES, TAVISTOCK—LAST DAY. OFFICES,

No. 28, THREADNEEDLE-STREET, and No. 25, PARLIAMENT-STREET. 15

BANKERS—Sir John Lubbock and Co., and the Naval Bank, Plymouth.

PURSER—Joseph Elliot Square, Esq., Plymouth.

SOLICITORS—Messrs. Woolcombe and Co., Plymouth, and Messrs. Terrell and Matthews, 30, Basinghall-street, London.

Capital £10,240, in 1024 shares, of £10 each.

Notice is hereby given, that the Directors will receive NO FURTHER APPLICATION FOR SHARES after WEDNESDAY, the 15th inst. By order,

W. L. TERNAN, Secretary.

Agents for Hull, T. W. Flint and Co.; for Le[illegible], Messrs. Beardshaw and Co.; and for Liverpool, Messrs. Tinley and Sons.

SOLWAY IRON MINING COMPANY.—Divided into 1280 shares, of £5 each—Deposit, £1 per share.

COMMITTEE OF MANAGEMENT. 16

WILLIAM COULSON, Esq., Tudhoe Hall, Durham.
JOSEPH DICKINSON, Esq., Alston, Cumberland.
HUGH WATSON FRIEND, Esq., Harbut Lodge, Cumberland.
JACOB WALTON, Esq., Greenends, Alston.
(With power to add to their number.)

MINING ENGINEER—Mr. George Emmerson, Auchencairn.

SEC. AND PURSER (pro tem.)—Mr. John Friend, 24, Dean-street, Newcastle-upon-Tyne.

SOLICITORS—Messrs. Armitshead and Brockbank, Whitehaven.

BANKERS—Whitehaven Joint-stock Banking Company.

This company is formed for the purpose of working the valuable hematite mines on the property of Samuel James Henry, Esq., at Auchenlech, near the head of Balcarry Bay, in the Solway Firth, so well known for their very valuable quality of rich kidney ore, and for the great extent of their metalliferous deposits.

The production of ore at these mines has been considerable during the past few months, while the explorations have been going on under the former company, and is sufficient to prove that an inexhaustible supply exists, and only requires the application of a moderately extended capital to bring its resources into full and beneficial operation.

The already large and rapidly increasing consumption of this description of ore by ironmasters in their furnaces, more especially for the improvement of their bar-iron, as well as from the limited number of such deposits, places the question of demand perfectly at rest.

In the present partially developed state of the mine, about 60 tons of ore per week are raised. The quantity can be increased to 60 tons per day, by the application of additional capital, in erecting machinery, and opening out new workings. The cost of raising and conveying to the place of shipment is six shillings per ton, inclusive of royalty. The selling price of the ore is, even in the present depressed state of the iron trade, ten shillings per ton. When this trade resumes a more prosperous condition, the price will be considerably advanced.

This company will be conducted on the Cost-book System. The capital will consist of 1280 shares of £5 each. The first deposit of £1 per share will be payable 14 days after the allotment takes place; further calls will be made at intervals of not less than two months.

Monthly meetings will be held in Carlisle, and a statement of the cost and produce laid before the meeting.

One fourth of the profits to be appropriated monthly for the accumulation of a guarantee fund, until the same amounts to £1000, to be held by the committee of management, to secure, as far as practicable, the dividends on a perfect equal basis.

Prospectuses, containing the report of Mr. James Burgess, mining engineer, may be had of the following brokers:—Mr. James Nicholson, Whitehaven; Mr. Joseph Hope, Jun., Carlisle; Messrs. Thos. F. Dickinson and Co., Newcastle-upon-Tyne; Messrs. T. W. Flint and Co., Hull; Mr. W. I. Barker, Sunderland; Messrs. R. Thompson and Co., Darlington; also of the solicitors.

Applications for shares to be made to the above parties.

BICKFORD'S PATENT SAFETY FUSE.—The Patentees of the ORIGINAL, and only real, SAFETY FUSE, beg to inform Merchants, Mine Agents, Railway Contractors, and all persons concerned in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder. The Safety Fuse is now protected by a Second Patent, and manufactured by greatly improved machinery. 17

BICKFORD, SMITH, DAVEY, Camborne, Cornwall.

WANTED, with or without Boilers, a SECOND-HAND HIGH-PRESSURE STEAM-ENGINE, with 24-inch cylinder, and 4-feet stroke—all the parts strong enough to bear an average pressure of about 17 lbs. per square inch on the piston.—Apply by letter, addressed "E. S.," at the office of the *Mining Journal*, 26, Fleet-street, London. 28

TO MECHANICAL ENGINEERS.—The Parents of a respectable and intelligent youth, just upon 18 years of age, who has served two years of his time, and had one year's previous initiation with a practical manufacturing engineer, are anxious, from circumstances which have transpired, to TURN HIM OVER, for the remaining three years of his apprenticeship, to a respectable master.—Address (free) "S. B.," at the office of the *Mining Journal*, 26, Fleet-street, London. 19

TO FOREIGN CAPITALISTS OR OTHERS.—TO BE DISPOSED OF, a very VALUABLE PATENT FOR FRANCE, and also ONE FOR BELGIUM, both taken out in the year 1848, for an Invention for which Letters Patent had previously been granted for Great Britain and Scotland, and which is now in successful operation in many of the large mining districts. The price at which the above would be sold will yield a very large return upon the purchase-money. 20

Full particulars may be obtained by addressing a letter (pre-paid) to "L. M.," at the office of the *Mining Journal*, 26, Fleet-street, London.

A MANUFACTURER in BELGIUM, who requires annually 100 cwts. of ENGLISH STEEL, suitable for the fabrication of RAMRODS, wishes to enter into CORRESPONDENCE with any HOUSE who would SUPPLY the SAME he, therefore, requests such manufacturer to address a letter to Mr. A. B., Poste Restante à Nessonvaux, Province de Liege, Belgium, with a general list of prices of such steels as are used in England for the above purpose. 21

CHEMICAL ANALYSIS, &c.—ANALYSIS and ASSAYS, or INVESTIGATIONS of ANY KIND, are UNDERTAKEN at the COLLEGE OF CHEMISTRY, LIVERPOOL. 22

Professor—Dr. SHERIDAN MUSPRATT, F.R.S.E.

Hon. Assistant—Mr. JOSEPH DANSON, F.C.S.

A list of Fees for Analysis, and for Students Working in the Laboratory, may be obtained by writing to Dr. Muspratt, College of Chemistry, Liverpool.

TIMBER PRESERVING COMPANY—PAYNE'S, BOTTRELL'S, and MARGARY'S PATENTS.—The OFFICES of the ABOVE COMPANY are REMOVED from Whitehall Wharf, Cannon-row, Westminster, to No. 50, KING WILLIAM-STREET, CITY. By order, 23

London, Dec. 23, 1850. R. C. DUKE, Secretary.

BODMIN MOOR CONSOLS, AND WHEAL TOM, DEER PARK.—Notice is hereby given, that the OFFICES of the above Mines are REMOVED to No. 11, AUSTINFRIARS, CITY, where prospectuses and reports can be had. 11, Austinfriars, City, Dec. 10, 1850. HENRY HORNE, Purser. 24

MINING COMPANY OF WALES.—PROSPECTUSES, containing REPORTS on the MINES and QUARRIES of the COMPANY, Terms and Conditions for its Government, &c., may be had of ST. PIERRE FOLEY, Secretary, to whom letters on the allotment of shares, and on the general business of the Company are to be addressed.—Offices, 24, Lincoln's Inn-fields, London. 25

NATIONAL BRAZILIAN MINING ASSOCIATION.—A REPORT is now in COURSE OF DELIVERY, at the COMPANY'S OFFICE, 26, Throgmorton-street.—January 1, 1851. 26

SHARES are TO BE SOLD in the following MINES:—

South Tamar	Mill Pool
Botallack	Cook's Kitchen
Wheal Castle and Boswedden	Spearne Consols
West Wheal Jewel	Wheal Owles
West Beam	Levant
West Wheal Treasury	Trelyon Consols

Apply at the offices of Mr. B. P. Batten, 1, Crown-court, Old Broad-street. 27

MINING PROPERTY.—BUSINESS transacted in every description of MINING PROPERTY, SHARES BOUGHT and SOLD, ADVICE GIVEN to PARTIES as to INVESTMENT, ADVANCES of MONEY MADE on this DESCRIPTION of PROPERTY, Statistics given on Mines, and the earliest information obtained from the mineral districts.—Apply to DURRANT & CO., Mining Sharebrokers, 58, Lombard-street. 29

MINING SHARES.—Mr. JOHN CREFT, No. 1, ROYAL EXCHANGE-BUILDINGS, LONDON, OFFERS his SERVICES, ON COMMISSION, to BUY and SELL MINING SHARES, and will select for capitalists those with the greatest chance of success, and take pleasure in furnishing a list of prices, together with all particulars. 29

MINING OFFICES,—48, THREADNEEDLE-STREET, LONDON.—Messrs. THOS. FULLER & CO., beg respectfully to call the attention of CAPITALISTS to MINING, as being the most SAFE and PROFITABLE MEDIUM of INVESTMENT, and are in a position to BUY and SELL in all the DIVIDEND-PAYING MINES, and have on hand several other Mines, which will insure to capitalists the most safe investment, and will pay from 15 to 30 per cent. 30

MINING OFFICES, ST. MICHAEL'S CHAMBERS, *ST. MICHAEL'S ALLEY, CORNHILL, LONDON.*

Mr. R. TRIPP, MINING AGENT, has FOR SALE SHARES in most of the best DIVIDEND-PAYING MINES and others, which will pay the purchaser, at present prices, from 15 to 35 per cent. 31

MINES.—MOLYNEUX & CO., 6, FINSBURY-PLACE SOUTH, and 6, WEST-STREET, FINSBURY-CIRCUS, have SHARES FOR SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to capitalists the safest and most unexceptionable investment.—Office hours from Ten to Five o'clock. 32

MR. W. BIRDSEY, MINING AGENT, begs to acquaint his Friends and the Public, that he has REMOVED to No. 1, ST. MICHAEL'S-ALLEY, CORNHILL, and takes this opportunity to thank them for the favours he has hitherto received. From an extensive experience in MINING PROPERTY, in which he has been engaged upwards of 20 years, Mr. Birdsey flatters himself he will be enabled to give much general information—he having personally visited most of the mines in Cornwall.—Mr. BIRDSEY trusts, by strict attention to the interests of those who may honour him with their confidence, to merit a continuance of their orders. 33

MR. JOHN DAVIES, MINING SHAREBROKER, *No. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.* 34

MESSRS. BOXALL & CO., MINING SHARE DEALERS, 5, *CROSBY HALL CHAMBERS, BISHOPSGATE-STREET.* 35

RAILWAY SHARES, CONSOLS, ENGLISH & FOREIGN STOCKS, and MINING SHARES, &c., BOUGHT and SOLD at the CURRENT PRICE of the day, either for Money or the Account.—CASH ADVANCED upon approved RAILWAY SHARES, for given periods, on moderate terms. 36

COUNTRY AGENCIES UNDERTAKEN.

A daily and hourly list of prices may be seen, and every information given, either for investment or speculation. BROAD & CO.,

No. 9, BELL-YARD, DOCTORS' COMMONS, LONDON.

RAILWAY SHARES—PUBLIC AUCTION.

MESSRS. R. TREDINNICK & CO. beg to inform the public that they intend to SELL, BY PUBLIC AUCTION, every DESCRIPTION of MINING and RAILWAY PROPERTY; and that their NEXT SALE will be HELD on WEDNESDAY, January 8, 1851, at Twelve for One o'clock precisely, at their AUCTION ROOMS, HALL OF COMMERCE, THREADNEEDLE-STREET, LONDON, where catalogues may be obtained the previous day.—Orders for sale are respectfully requested to be sent on or before Monday morning in each week, so that they may be inserted in the catalogues. 37

Messrs. R. TREDINNICK & CO. beg to OFFER their SERVICES in the PURCHASE or DISPOSAL of SHARES in MINES. With an extensive connection in the several mining districts, they will be happy to acquire and afford every information connected therewith, and which may be at all times obtained on application at their offices.

Hall of Commerce, Dec. 28, 1850.

ANGLO-MEXICAN MINT OFFICE. No. 5, Broad-street-buildings, London, Dec. 26, 1850.—NOTICE.—A SPECIAL GENERAL MEETING of shareholders in this Company will be HELD at the office, as above, on Tuesday, the 7th day of January next, for the purpose of declaring a dividend on the shares of the said Company.—The chair to be taken at One o'clock precisely. 38

ALFRED GODFREY, Secretary.

ROYAL SANTIAGO MINING COMPANY.—The Directors hereby give Notice, that the HALF-YEARLY GENERAL MEETING of the shareholders will be HELD at the office of the Company on Wednesday, the [illegible] January, 1851, at One o'clock precisely, when the Directors will [illegible] 39

38, Broad-street-buildings, Dec. 21, 1850.

WICKLOW COPPER MINE COM[illegible]

HALF-YEARLY MEETING of the proprietors [illegible] the Company, No. 10, Leinster Chambers, 43, Dame-street, [illegible] January, at the hour of Two o'clock.—Dublin, January 1, 185[illegible] 40

SOVEREIGN LIFE ASSURANCE COMPANY.

The fifth annual meeting of this company was held at the establishment, 8t, James's-street, on Wednesday, the 1st inst.

Lieut.-Colonel Lord ARTHUR LENNOX in the chair.

Mr. DAVENPORT (the secretary) having read the minutes of the last meeting, the CHAIRMAN said, in moving that the report be read, it would not be necessary for him to trespass at any length upon their time and attention; nevertheless, standing in the position he did, he trusted that a few words from him on the present occasion would not be misplaced. He congratulated the meeting on the steady increase of the income of the company; if it had not been increased this year in the same proportion as in previous years, it must be partly attributed to lapsed policies. In 1849 there was an income of 6614*l.* from premiums only; in the year 1850 it was 7293*l.* He could not allude to the prosperity of this company without reference to Mr. Henry Davies, and there was never an instance, to his knowledge, of greater zeal and exertion than that displayed by this gentleman. He felt himself compelled to do this act of justice to Mr. Davies, and in this he was supported by the whole board of directors. (Hear, hear.) He was happy to say that the profits exceeded the amount of the expenses for the year. This he thought was particularly worthy of attention, inasmuch as they had not advertised in the past year as they had done previously—93*l.* being the whole charge for advertisements. (Hear, hear.) However, as the year 1851 was likely to be remarkable, he thought they would act wisely to advertise to a great extent. If gentlemen would trust themselves into that large glass house, he thought the best thing for them to do beforehand would be to insure their lives. (Hear and laughter.) He would draw attention to the loan department of the company, to show how well it was conducted, for out of 102,450*l.* advanced on loans, only a loss of 324*l.* had occurred. They would see in the last paragraph of the report of the directors that the attention of the shareholders was drawn to the fact, that their income from premiums had now increased to 8000*l.*; whilst the only loss by death in 1850 was to the extent of 100*l.*, which he thought highly satisfactory. There was another claim for 400*l.*, but this would come into their next financial year. He (the chairman), in conclusion, hoped the proposed dividend of 5 per cent. would be unanimously carried, as in the former year, and called on the secretary to read the report prepared for the meeting.

Mr. DAVENPORT read the following report:—

The directors have great satisfaction in laying before the shareholders a statement of the affairs of the company, for the year ending 9th October, 1850. During that period, 301 proposals have been received by the company for assurances, of which 189 have been accepted and completed, producing an income on new policies of 2524*l.* 18s. 8d., and assuring the sum of 85,327*l.* 19s. It may be mentioned that the further sum of 1929*l.* 15s. 7d. has been received for additional premiums to the end of the year 1850. It will be remembered, that in the report on the position of the company's affairs made to the directors in January last, by Mr. Neison, the actuary, particular attention was called to the number of policies which had lapsed up to that time, the result being to yield a large profit to the company, and to relieve them from further responsibility in respect of such policies. During the past year many additional policies have not been renewed, a circumstance which must not be lost sight of, in considering the present position and future prospects of the office. The directors beg to refer to the financial statement, recently issued to the shareholders, as a proof of their having carried out the intention they have often expressed of keeping the working expenses of the office at the lowest possible point, consistent with the promotion and development of its business. The directors trust that the removal of the company's offices, which took place in the early part of the year, will meet with the approval of the proprietors. Although this step has added to the expenses of the company during the year, the outlay will, it is hoped, be more than compensated by the superior eligibility of the present offices. The house recently occupied, and which is held on lease, has been sub-let, on terms which more than cover the rent for which the company are liable, while a portion of their present premises have been let, so as to reduce the future expenditure under this head considerably below that which has hitherto been incurred. The great exertions now made by all assurance offices to increase their business, have induced the directors to engage the services of one or two persons well qualified to promote the success of the company in the provinces, a field from which a comparatively small number of policies only have hitherto been obtained. The directors believe that this measure will tend materially to extend the operations of the office. The adoption of the system of rendering policies indisputable, according to the resolution passed at the last meeting of proprietors, has met with general approbation. With reference to the loan department, the directors have to announce a loss of 324*l.*, in respect of money advanced on securities, taken soon after the establishment of the office. When it is recollected that up to this period loans have been effected to the large sum of 102,450*l.*, the small amount of loss will, it is hoped, be regarded as striking evidence of the great care and prudence exercised by the directors and the able referee of the company, in dealing with its funds. The present amount on advances is 43,993*l.*, the sum of 58,531*l.* having been repaid. The directors, in conclusion, beg to call the attention of the shareholders to the gratifying fact, that while the income from premiums only has increased to upwards of 8000*l.*, the actual loss by death during the year ending 9th October last has been only 100*l.* Since that period other claims have arisen to the amount of 400*l.*, which will fall within the next financial year. The directors retiring in rotation are Sir James Carmichael, Bart., J. P. Bathurst, Esq., and Charles Osborn, Esq., who, with the auditors, are eligible for re-election. The directors recommend that a dividend be declared on the paid-up capital for the year ending 9th October last, at the rate of 5*l.* per cent. per annum.

The Rev. Dr. MAJOR rose with great pleasure to move that the report be received and adopted.—Mr. CHAPPELL seconded the motion.

On the motion of Mr. HEWER, the minutes of the former meeting were confirmed.—The report was adopted unanimously.

Major CAMPBELL said that he had been looking over the financial statement, when a question occurred to his mind, whether it would not be advisable to close their capital account. With that view, he would ask what was the present capital of this company?—Mr. DAVENPORT observed, in reply, that the amount paid up was nearly 43,000*l.*

Major CAMPBELL recollected that, on the last occasion, a measure was adopted for the purpose of issuing new shares, when the first chance was given to the shareholders to take such proportion as they might deem advisable. He would now ask what proportion of those shares were taken by the old, and what by the new shareholders?—Mr. DAVENPORT replied that almost the whole of them had been taken by the old proprietors, who had been with them from the origin of the company. (Hear, hear.)

Major CAMPBELL was glad to hear that. He would suppose this company to be in a very flourishing state, and it now stood well with the public; would it be fair to allow strangers to come in and share equally with those proprietors who had borne the burden of first establishing the company? (Hear, hear.) In speaking of closing the capital account, of course he left it to the directors to fix the sum at such an amount as would supply the wants of the company. His wish was to move a resolution, that as soon as shares were paid upon to the extent of 45,000*l.*, the directors should be empowered to close the capital account. (Hear, hear.)—Mr. JOHNSTON seconded the motion.

Mr. Ald. FAREBROTHER (a director) said his only objection was that such a resolution would not work well with the public, for it might be taken that this society had only subscribed a sum of 45,000*l.* It ought to be understood that this 45,000*l.*, or whatever it might be, was only the available part of the capital of the company, and that the real capital was 250,000*l.*; in other words, that they had only paid up 45,000*l.* of their capital, but the public held security for the whole 250,000*l.* in the body of the shareholders. (Hear, hear.)

Mr. GRANGER, M.P. (deputy-chairman), agreed as to the advisability of closing the capital account when they could not use their money advantageously for the company. They had received from the proprietors 42,725*l.*, on which they had received as interest 1784*l.*—that being upwards of 4 per cent. The shareholders must be aware that the directors had from time to time considerable sums of money in hand, when the only use they made of it was to place it in the hands of billbrokers, who would naturally offer them as little interest as possible. He, as well as the other directors, had agreed amongst themselves that the capital account ought to be closed; and he was glad to see the same opinion entertained by the shareholders. (Hear.)

Major CAMPBELL said, this resolution might be rescinded in case of more capital being required. It was merely a temporary measure for the benefit of the shareholders. (Hear.)—The resolution was then agreed to unanimously.

Mr. WICKENS made an eloquent appeal to the meeting in behalf of Mr. H Davies, the solicitor to the company, who had become dangerously ill from his great exertions in placing the company upon its prosperous basis. He concluded his observations by proposing that Mr. Davies should be awarded a certain portion of paid-up shares, in consideration of his valuable services.—Mr. HEWER seconded the motion.

Much discussion ensued, in which Mr. Baker, Mr. Shepherd, Mr. Burton, and other proprietors, took part.

The CHAIRMAN removed a misconception, that Mr. Davies had received any compensation in the preliminary expenses—the amount there mentioned having been paid to the promoter of the company. He stated that Mr. Davies had not been compensated for his valuable and arduous services; the only amount paid to that gentleman being a small bill of costs. His other services were of that nature as could not be embraced in a professional bill of expenses.

Dr. ASHBURNER knew that Mr. Davies had spent more than 500*l.* out of his pocket in serving the company. His conduct had been most chivalrous in the support of his friends who possessed shares in the company. (Hear.)

Mr. MILEY stated that, after paying all claims, the company now possessed a clear property of 10,000*l.* Two years ago, some were thinking of offering a premium to another company to take them up. Now they should require a bonus to give themselves up. (Hear.) Who was the party that bought up the dissentient shareholders on that occasion, and removed the difficulties which presented themselves, but Mr. Davies, in connection with some of his friends? (Hear.) He hoped that only one feeling would exist in the present meeting as to the valuable services rendered by Mr. Davies in establishing the company, and bringing it round to its present prosperous state.

Mr. CAMPBELL returned thanks on behalf of his partner, Mr. Davies, for the kind feeling manifested on this occasion.

Mr. BAKER moved, as an amendment, that previous notice be given of the intention of compensating Mr. Davies, in which he was warmly seconded by Mr. BURTON.

The resolution was then altered for presenting Mr. Davies with a sum of 1250*l.*, it being illegal for the directors to appropriate the shares for such a purpose.

The CHAIRMAN declared the resolution carried, and said, if the directors had voted either way, they had but one feeling of admiration for the zealous services of Mr. Davies.

The dividend of 5 per cent. for the past year was then passed unanimously.

The meeting was then agreed to be adjourned till Wednesday, the 5th of February, for the confirmation of the above resolution.

The retiring directors, Sir James Carmichael, Bart., J. P. Bathurst, Esq., and Charles Osborn, Esq., were re-elected. The auditors were also re-elected.

A vote of thanks was passed to the noble chairman and directors, when the CHAIRMAN took an opportunity of paying a high compliment to the medical officers, as well as to the referee of the loan department, to whose sound advice he mainly attributed the prosperity of the company.

The meeting then adjourned.

THE GREAT EXHIBITION PALACE IN HYDE PARK.

The members of the Society of Arts were specially invited, on Tuesday last, by Messrs. Fox and Henderson, the contractors, to view the splendid edifice now progressing towards completion under their able guidance. Although the time originally appointed has been found too short to execute their onerous task, and very much remains to be done before it will be fit for the reception of the works of industry for which it is designed, yet the present opportunity seems a fit one for a general review of the progress already made. The recent lecture of Mr. Paxton, delivered at the rooms of the Society of Arts, will have informed our readers sufficiently as to the origin of the building, and the circumstances under which his magnificent plan came under the notice of the commissioners. The able and interesting address of Prof. Cowper, on Tuesday, which was devoted to an explanation of the details of construction, will supply us with most of the facts, from which may be gathered a correct idea of what has been already achieved, although it will necessarily fail in giving an adequate notion of the vast mechanical skill and labour expended upon the building.

From the most accurate accounts which have yet appeared concerning this marvellous structure, we find that it covers about 18 acres of ground, and, as originally designed, was intended to have a uniform appearance throughout; but on the suggestion of the contractors, the addition of a transept was made, which is generally admitted to prove one of the most attractive features of the building. It is divided into aisles, the height of the centre aisle being 64 feet, the side ailes 44 ft., and the outside aisles, or first story, 24 ft. The transept is 108 ft. in height; the entire number of cast-iron columns employed in the construction is 3300, varying from 14 ft. 6 in. to 20 ft. in length. The number of girders is 2224, in cast and wrought-iron, with 1128 intermediate bearers, for supporting the floors of the galleries over the large openings of the aisles. The fronts of the galleries are supported by cast-iron girders. The dimensions of the building are 1848 ft. in length, and 456 ft. in the widest part. The whole is supported on cast-iron pillars, united by bolts and nuts fixed to flanges turned perfectly true, and resting on concrete foundations. The total cubic contents of the building are 33,000,000 ft. The six longitudinal galleries, 24 ft. in width, running the whole length of the building, and the four transverse ones, of the same dimensions, afford 25 per cent. additional exhibiting surface to that provided on the ground floor. Since the delivery of Mr. Paxton's address, it has been found necessary to add another gallery, and erect an additional building for the reception of machinery, so that there will be between seven and eight miles of walks in the Exhibition, exclusive of the building we have just alluded to, which is to be 936 ft. long, and 48 ft. wide Looking down the transept, the building has a most elegant and graceful appearance, though the effect is somewhat destroyed by diagonal bracing at its meeting with the central aisle, consisting of round iron rods of 1 in. diameter, strengthened at the lower ends by 1¼ in. square shoulders; and the upper ends are prepared with screws, which pass through an open boss, and are secured within by screw and nut. Iron plates are fixed round each of the columns, at about 2 ft. from the lower end of the ties; and four vertical iron bars are firmly secured to the plates at the top, and to the projecting flanches of the column and socket at bottom. At each of the meeting angles there are altogether 12 sets of braces; there are likewise four sets of braces at each of the inner angles of the 24-ft. walk or avenue. Under each of the gallery crossings, or passing places, are four sets of diagonal ties, and in some of them an ornamental boss, introduced so that the screw ends and nuts are entirely concealed.

The chief parts yet to be completed are the formation of the galleries, the glazing of the transept and sides of the outer aisles, and, lastly, the decoration of the building, which will be entrusted to Mr. Owen Jones. As seen on entering from the park, the long lines of galleries, stretching into the distance, appear to meet at a point. From the peculiarity of the construction scaffolding has been dispensed with, all the materials being previously prepared away from their site. Upwards of 2000 men have been employed in the erection, yet, from the vastness of the edifice, the works appear but thinly populated, and the men, horses, and waggons, look no bigger than toys. The whirr of the engines is hardly audible, and the details of the operations are lost, so that the long unbroken lines of galleries stretch away on both sides. Mounting still higher—to the leads which run on either side of the great transept—the view of the roof of the building can be seen. A vast sea of glass stretches so far on all sides that the view of the park is almost shut out. The great beauty of the design consists in this—that each section of the building is a multiple of the other. This arrangement has this effect—that galleries radiate from any point at which the spectator places himself. Thus the thousands of columns which support the building, and which else would appear like a confused forest, fall, viewed from any point, into regular avenues, each covering the other. Notwithstanding its extreme lightness of appearance, the building is stated to be in every part capable of bearing at least four times the weight that can by any possibility be placed upon it.

The provisions made for ventilation and drainage are among the most interesting of the varied contrivances employed. By the means adopted almost any amount of fresh air can be admitted at pleasure, avoiding, at the same time, injurious currents, or draughts, and the ingenuity displayed in effecting this great object will justify a detail of the process. In the spaces or panels, formed by the iron and wooden columns vertically, and by the sill and plate horizontally, as already described, are introduced the lower tier of ventilators, originally intended to have been formed of luffer or louvre boarding, similar to that so extensively used in breweries, and whiting and other establishments; but the ventilators, in their present form, have a light appearance, and are more easily opened or shut, when required, than by the ancient and cumbersome luffer-board plan. Each frame of the lower tier of ventilators is constructed of seven-eighths deal, is 7 ft. long, 4 ft. 3 in. high, and 4½ in. deep, being dovetailed at angles, and further strengthened behind by angle-ties. The blades, or luffers, are of sheet-iron, forming a flat S curve. Each blade is hung as a swing dressing-glass, with two ⅝ in. pivots, resting in proper bearings, fixed in the sides of the frame. The blades, which are placed horizontally, are 6 in. from centre to centre—the whole being connected together by a vertical deal chamfered bar, by means of forked iron arms, 3½ in. long, and fixed to the sides of a sinking or groove in the vertical connecting bar, which is 3 inches in width, and of sufficient length to embrace the eight blades. By the weight of a single pound all the blades can be opened or shut at will, so that a simple lever apparatus will complete this important part of construction. A wooden stop is introduced, both at top and bottom of the frame, to prevent the upper and lower blades from moving beyond their prescribed limits when closed. The construction of the upper tier of ventilators is similar to that of the lower tier; but, instead of eight blades, there are only five in each frame. The upper ventilators occupy the spaces above the close boarding, and are immediately behind the ornamental iron fanlights or panels.

The drainage of the vast structure will be provided by a still more elaborate display of mechanical skill, the great object to be attained being that no portion of the gutters, extending over an area of roof of from 18 to 20 acres, should at any time be overflowed, however heavy the rain falling upon it. The ridge and furrow plan of roofing requires that every length, both of longitudinal or transverse furrow, or gutter, should be so formed as to carry off half the rain water received into it from the skylights in one direction, and the remainder in the other direction. This is effected by cambering every length of gutter, which not only secures this important condition, but also prevents what is termed "sagging"—that is, sinking of the timber below its proper level line; thus, each gutter plate is considerably curved upward, and, looking along under a continuous line of skylights, the effect is very striking. The surface water from the skylights is received into the longitudinal or three-way gutters, and these again empty themselves into the framed transverse gutters at either end; the sectional area of the former being about 5 square inches, whilst that of the latter is 27½ square inches. The hollow iron columns which support the various gutters act as so many rain-water pipes, in conveying the water from the roof into the cast-iron drain pipes, running in parallel line along the whole length of the building, and which have each a sectional area of 28½ square inches. The principal drain, or culvert, runs along under the ground at the east end of the building. It is of an oval form; its height being 2 ft. 6 in., its width 2 ft., and length 890 ft., to its junction with the metropolitan sewer under the carriage drive on the south side of the great building. To the same outlet, a similar culvert, from the central transverse drain, runs under the same road just outside the outer line of the footpath, having a fall of 1 in 288, and extending altogether 855 ft. In addition there is a cross drain, which extends 294 ft. southward, and has a fall of 1 in 240; it is continued by a 24-in. drain, with a similar inclination, and running into the culvert in front of the building, a distance of 190 ft. Next, there is a 12-in. drain tube extending westward, and 964 ft. in length to its junction with another sewer. At the west end of the building another 12-in. pipe extends from the central line of the building, to join the drain tube just mentioned. There is on the north side a 9-in. tube, 348 ft. long, and a 12-in. drain 672 ft. in length, returning southward 78 ft., and further extended, in the same direction, to meet one of the lines of longitudinal drain pipes. Lastly, there are 38 6-in. inlets from the bottoms of columns to the drain on the north side of the building, by which the whole system of drainage is completed.

The most marked and almost unique feature of the present building, as Mr. Paxton stated in his lecture, is that no stone, brick, or mortar are used; but the whole is composed of dry material, ready at once for the articles to be exhibited. By no other combination but that of iron, wood, and glass, could this purpose have been effected; nor is the absence of any moist material in the construction, and the provision made for the vapours which must arise and be condensed against the glass, less important, as enabling the exhibitor to place his manufactures in their respective situations, without the probability of their being tarnished by the exposure. The necessity of cutting down the large trees within the enclosure has been obviated by means of a curvilinear roof over the transept. The roof is built on the ridge and furrow principle, and glazed with British sheet-glass—the sheets being 49 in. long, being 1 in. longer than those of the Chatsworth Conservatory; and all the roof and upright sashes being made by machinery, the glazing proceeded with amazing rapidity—little more being required than to fix them. The length of sash-bar used is 205 miles; and the total quantity of glass required is 900,000 ft., weighing upwards of 400 tons. Even the prevention of dust has not been overlooked by the projector, who has devised the plan of trellised wooden pathways, with spaces between each board, through which, on sweeping, the dust will fall into the vacant space below. The boards for the flooring will be 9 in. broad, and 1¼ in. thick, laid ½ in. apart on sleeper joists, placed 4 ft. apart; the galleries will be, of course, laid with close boarding. In order to subdue the light in so large a building covered with glass, all the south side will be covered outside with canvas, allowing a current of air to pass between the canvas and the roof—the anticipated advantages being that the glass will be protected from injury by hail, the building rendered cooler than if the screen were inside, and the ventilation afterwards regulated at pleasure.

In the course of his lecture, Prof. Cowper frequently referred to models and diagrams, in illustration of the details of the building; and, wanting these, it is impossible to form an adequate idea of the talent and ingenuity which the construction has called forth, the mechanical and engineering skill developed, the intricate calculation and nice distribution of forces, the novel appliances of old facilities, the invention of machinery where the work required it, any more than of the energy, rapidity, and perfect organisation of labour with which the undertaking has been brought to its present advanced stage. The professor stated that, when Mr. Paxton laid his plan before Messrs. Fox and Henderson, they went forthwith to the commissioners, and laid their suggestions before them. The cost, details, and required strength of materials were all determined in a week. Messrs. Fox and Henderson were the only firm that made a tender; and in the contract they reserved to themselves a large discretionary power as to the mode of carrying it out.

The building they had constructed was not strictly speaking an architectural edifice. Architects building up edifices stone by stone, and attending chiefly to beauty of design, were not under the necessity of making minute calculations, but the mechanical engineer must calculate step by step, and, therefore, there was not a point in the edifice where they were assembled which had not beforehand been submitted to the most rigid calculation. What had been the result? There were no broad surfaces—no columns 7 feet in diameter, as at the British Museum, supporting nothing at all but a succession of straight lines. People looked and said, "What a slight building." The building was a light one, it was true; but the difference lay between the words "slight" and "light," and the letter "s" ought to have been omitted. As an illustration of the strength of hollow columns, the learned professor showed that two pieces of quill, 1 inch in height, would support a weight of nearly 2 cwts. He also announced and explained the proposition that a given quantity of matter disposed in the shape of a tube pillar would bear a pressure nearly four times as great as the same quantity in the form of a solid column. He described the mode in which the beds of concrete on which the columns rested were made, and then adverting to the fact, already noticed, that all the dimensions were multiples of 24, he drew attention to the effect of this arrangement—that whichever way the spectator looked the columns covered each other, and all appearance of confusion was entirely destroyed. Had these relative distances not been accurately preserved, the girders, cast as they were at a distance, would not have fitted. The cast-iron columns being mounted on each other, tier above tier, with centre-bits intervening between them, it was necessary that the points of junction should be fitted to each other with mathematical precision. This necessity the professor illustrated by pieces of wood roughly cut in pillar shape and placed above each other, which, of course, would not stand straight, the same experiment being repeated with pieces of wood pillar shaped, and the ends turned in a lathe, of course with a very different result; thus, it became requisite that the ends of the pillars should be turned. There were 2500 columns, and 1200 "facings" to be done. Few engineers would have ventured on such an undertaking, and the result was that there was not a crooked line in the building. He then adverted to the girders, and proceeded to show how, in technical language, they "behaved." As an illustration on this subject, he demonstrated by experiment that thin tin plates in a tubular form could bear a pressure of 2 cwts., whereas in a flat form they gave way at once. He explained by models the object of the girder, and showed that, with its trelliced form, every part of it was designed to distribute the strain which would otherwise have fallen unduly upon particular points. One of these models was executed in thin lath, yet it bore a pressure of 1 cwt. without breaking. The subject of girders naturally led the learned professor to consider the amount of "stiffness" secured to the building. Here his illustrations were again in lath, and were admired for their great simplicity and ingenuity. He then proceeded to explain the method of proving the girders by the hydraulic press, and he stated that while they generally broke with a weight of 30 tons, and were tested by one of 15 tons, the greatest pressure to which they could be subjected in the building was 7½ tons.

He adverted briefly to the Paxton gutters, which were made by hand for the Chatsworth Conservatory, and explained the ingenious contrivance by a groove on the outer side of each gutter for catching the moisture condensed within the roof of the building. The gutters were now cut entirely by machinery constructed from the designs of Mr. Fox. He also drew attention to the machinery for making sash bars, for painting and for drilling. By models, the Professor explained the "thrust" and "tension" to which the arched roof of the transept was subjected, and minutely described the way in which the wooden ribs of the arch were formed, and the manner in which they were raised in pairs at a time. Technically, the ribs are called "principals," and are composed of four layers of wood, laid flat on each other, the two central ones 4 in. thick, and the two sides 2 inches. A curved plank and a strap of iron above it, shaped to the arch and bolted to it, held the whole together, and it was found that when the principals were set up in pairs, with their purlings and diagonal ties, the friction alone was sufficient to prevent them spreading out. The weight of each pair of principals raised was 8 tons, and the first idea of taking them up in that manner was suggested by Mr. Wilbee, Messrs. Fox and Henderson's agent; that idea was subsequently expanded by Messrs. Fox and Henderson into making each pair of principals its own traveller when raised to the required height, and thus the whole work of forming the arched roof of the transept was carried forward with the utmost simplicity and dispatch. Prof. Cowper stated that Mr. Fox had personally superintended the process of construction from the commencement, and he highly and deservedly complimented him, not only for his indefatigable exertions, but for the great ability which he had displayed. Mr. Fox had been there frequently from 7 o'clock in the morning till 11 o'clock at night, and every operation had been carried on under his personal superintendence. The general management of the works had been most efficiently conducted by Mr. Cochrane. The laying out of the ground had been intrusted to Mr. Browniger, and Mr. Cowper, a son of the lecturer, had constructed the new machinery from the designs of Messrs. Fox and Henderson.

The learned professor was warmly applauded at different portions of his lecture, and loudly cheered at the conclusion, after which he proceeded to the different parts of the building, and on the spot explained the hydraulic press for proving the girders, the patent cranes, the travelling scaffolding, the punching and cutting machines, the mode of preparing the Paxton gutters, the circular saws for cutting the gutters and sash-bars, the drilling machine, the painting machine, the glazing, the tents for glazing, the system of ventilation by louvre boards, and the construction of the transept.

No room for doubt now remains that this great Palace of Industry will realise the brilliant anticipations formed of it, and satisfy the various requirements for which it was constructed, being itself the greatest wonder of the collection it is intended to enshrine. Its close proximity to the highway unluckily prevents the proportions of its principal *façade* from being thoroughly seen and appreciated. The south end of the transept has now been completed, and presents a very imposing appearance; but however striking its appearance during the day, it is much more so at night, when, as happens once or twice a week, a huge bonfire of shavings is lighted, and every line and column in the building is illumined by the flame. In noticing those whose ability and skill have been instrumental in the progress of this great work, the highest praise is due to Messrs. Cochrane and Co., of Woodside Iron-Works, near Dudley, and Mr. Robert Johnson, of Holly Hall Works, near the same place, for the energy and attention they have shown in the preparation of the various castings used throughout the edifice. Mr. Paxton's idea is, after the Exhibition is over, to convert the building into a permanent winter garden, and make carriage drives and equestrian promenades. Between the two miles of galleries and two miles of walks upon the ground-floor, there would be sufficient room for plants, the whole intermediate space to be filled with shrubs from temperate climates; while in summer the upright glass might be removed, so as to give the appearance of a continuous park or garden. Notwithstanding the unfavourable weather, the members of the Society of Arts attended in considerable numbers, and the proceedings of the day were of the highest interest.

At the London-bridge new railway terminus a new and elegant device, not hitherto used in the construction of railway stations, has been adopted—that of roofing both stations with sheet-glass, which gives to the whole range of platform, of some 300 ft. long., a light and cheerful appearance.

A Compendium of British Mining.

BY J. Y. WATSON, ESQ., F.G.S.*

No. I.—GENERAL FEATURES OF A MINE.

A mine is a depository of mineral, or ore, in the bowels of the earth, and opened for the purpose of obtaining the produce. It has been legally determined that no mine can properly be said to exist, before it has been opened by shafts, pits, or levels; for, before that has been done, there can be no positive certainty that any mineral, or ore, lies in that particular district. As land includes, in general, everything beneath its surface, the owner in fee of land is almost invariably the owner of the mines lying underneath, with the exception of gold and silver mines, which belong by prerogative to the Crown.

The mines in Cornwall are generally worked by a company of proprietors, called adventurers, who agree with the *lord*, or owner of the *soil*, for a certain number of years, paying either a fixed per centage, or a certain proportion of the ores raised, called *dues*, being 1-15th, 1-18th, or 1-20th, as may be agreed upon. The grant thus made is called a *sett*. The bounds or limits of a mine are marked generally on the surface by large stones, placed at equal distances; and, considering that many of the mines immediately adjoin each other, and the bounds are only marked out above, it is astonishing how few instances occur of the miners employed in one mine breaking through their limits into the sett of their neighbours. The property of the soil above is entirely distinct, but the lessees of the sett have the privilege or right of sinking such shafts as may be necessary for the effectual working of the mine, and for which they pay what is termed "surface damage."

In commencing a mine from the surface, it is first ascertained, as near as possible, the situation and direction of the lodes, or veins of ore, which is generally done by costeaning, or digging pits in different parts of the sett. By this means, the best situation is found for sinking (or, as it is called in Cornwall "placing") the shaft, so as to take the lode at a certain depth. The shaft is generally sunk about 20 or 30 fms., according to the nature of the ground, when a horizontal level, or gallery, called an adit, is driven east and west, for the purpose of ventilating the mine, and for drawing off the water as the shaft gets deeper. [In some lead mines, where the object is to prove their value as quickly and economically as possible, shafts are sunk on the course of the lodes.] At every 10 fms. the shaft is sunk, similar levels to the adit are driven east and west; these levels being again subdivided by small winzes, of about 10 fms. in height, and 16 fms. apart, the mine becomes finally divided into pitches. The engine-shaft is always sunk to a greater depth than the lowest level, in order to keep the working shaft free from water. The object of the shaft and levels is to get at the ores, and put the lode into such a state, that it may be worked conveniently by a number of men. The ore, when broken from the lode, is wheeled in barrows along the levels to the shaft, and then drawn to the surface by an engine; and the winzes, besides forming communications from one level to another, ventilate the mine. The shaft is generally timbered for 30 fms. in depth—sometimes the whole way, depending on the nature of the ground; the timber used is Norway pine, and it is estimated that 50,000*l.* worth is annually used in the mines. The levels generally are 3 feet wide, and 6 or 7 feet high. The shaft having been sunk in the manner described, the water is pumped out of the bottom levels, by means of a steam-engine, into the adit, which carries it off either into the nearest valley, or into the sea.

The great Cornish Adit is a most extensive and valuable undertaking, and has but few in the world to exceed it in importance. Its commencement is near the village of Ferney Splat, in the Carnon Valley; and its longest branch extends to Cardrew Downs Mine, which is nearly 5½ miles from its mouth. One branch of it unwaters the Consolidated and United, and other mines, as far westward as Ting Tang; a second extends through Poldice, Wheal Unity, Wheal Daniel, and Wheal Jewel, to Wheal Hope; a third reaches Chacewater Mine, and thence through North Downs, Wheal Chance, and Treskerley to Cardrew Downs. In 1819, Mr. Thomas estimated the total length of its various ramifications at nearly 30 miles; and it has been considerably extended since—so that its present length is probably rather over then under 35 miles. In the shallowest parts it is not more than 12 or 14 fms. deep; whilst, in one instance, at Wheal Hope, it is 70 fms. below the surface; its average depth may probably be from 35 to 43 fms. More than nine-tenths of its extent is in the slate formation; the extremities of all its principal branches, however, enter the granite. It intersects most of the elvan courses, and by far the greater number of the lodes and cross veins of the district. Allowing a tract of 200 fms. in breadth, outside the limits of its ramifications, to be drained by it, the area it unwaters may be computed at nearly 5550 acres. It has been computed that this adit effects a saving in the article of fuel alone of 19,000*l.* a year in the district it unwaters; as, were it not for this adit, the additional steam-power that would be required to draw the water to the surface, which is now only drawn to the adit, and intersected by it in its descent, would require an annual increase of 24,000 tons of coal. This undertaking was commenced in the year 1748 by the ancestor of the Messrs. Williams, of Scorrier House; and it has conferred on the neighbourhood a benefit unequalled by that of any other public undertaking in Cornwall.

The valleys of Cornwall are not deep, and there are few instances where ore is raised from or above the adit level, to pay for the future operations of the mines, and seldom more than a 40 fm. adit can be obtained.

After the shaft has passed through the lode, and the first level run, as the lode descends with an inclined plane, or dip, more or less, in order to find it at the next descent, the shaft is continued, and cross-cuts made every 10 fms. to reach the lode, which, being divided into pitches, each pitch is let to a tributer, who, with his *pare*, or gang, break, raise, and pay for dressing the ores, the weekly or monthly produce being made into heaps of about 100 tons each. Samples of these are sent to assayers, to determine the value according to the produce, or quantity, of fine copper contained in 100 parts of ore; and the samplings are then sold at the weekly ticketings, and the tributers receive a certain share of the value of the ores for their labour.

The estimated rate of wages for the county is as follows, per month:—Tributers, 2*l.* 15s. to 3*l.* 11s. 7d.; tutworkmen, 2*l.* 10s. to 3*l.* 1s. 11d.; surface labourers, 2*l.* 2s. to 2*l.* 5s.; boys, 13s. to 1*l.* 8s.; and females, 12s. to 18s. I imagine this rather exceeds the present rate. And the proportions in 100 persons employed in a mine, is 30 tributers, 20 tutworkmen, 10 surface labourers, 25 boys, and 15 labourers. The tributer may not for many months earn a remunerating profit, but if the indications of the lode be favourable, he will at every setting renew his bargain, in the hope that the lode may eventually become rich. If before the completion of his term, his expectations be realised, he and his *pare*, or gang, are often able to work out ore to the value of 60*l.* or 100*l.* each, sometimes more; but at the next renewal the rate of tribute is re-adjusted, and fair wages earned until the ore fails.

ON THE NATURE OF VEINS.

Most rocks are traversed by fissures, and which, when they contain minerals, are called *veins*, *lodes*, or *courses*. In regard to accurately describing them, Mr. Carne has determined—By a *lode* is meant a metalliferous vein. By *east* and *west lodes*, metalliferous veins whose direction is not more than 30° from these points. By caunter *lodes*, metalliferous veins whose directions are from 30° to 60° from east and west. By *cross-courses*, veins whose direction is not more than 30° from north and south. By *flookan veins*, veins of whitish or greenish clay, generally argillaceous. By *cross flookans*, veins of this clay having the same direction as the cross-courses. By *slides*, veins of slimy clay, greatly inclined, having generally an east and west, and rarely a north and south, direction. The metal contained in these veins is generally found combined with other substances, and is, therefore, called *ore*. Veins or lodes run to a considerable extent, sometimes for several miles, and have, in no instance, been followed to an actual termination, being always relinquished when no longer worth working; their direction, or dip, downwards generally forms an angle of 70° or 80°.

If a lode continues in a straight line, it is called a regular lode—if it occasionally swells and contracts, an irregular lode, or a pipe vein; the wider parts are called *bunches*; and when it divides into branches it is said to *take horse*, or come into dead ground, leaving a branch of ore on either side. When a vein *takes horse*, it is generally considered a good indication, for (as the miners say) at the tail of the horse, there are generally some rich bunches of ore. Sometimes a vein called a *cross-course* interferes, and *heaves* the regular lodes, from 2 feet to 50 fathoms, out of its course; or it becomes reduced to a mere thread, and reappears at a distance. A cross lode in Wheal Peever, about three miles east of Redruth, extends from sea to sea. On its west side every vein it passes is heaved 50 fathoms further north from the line it would have otherwise pursued, and which the other part still keeps. It was not until after a search during 40 years, that this heaved lode was discovered; for, until mining became so general, the heave of a lode by a cross-course greatly puzzled the miners. At present, they find little difficulty on such occasions, as even when an individual case furnishes no means of ascertaining the direction in which the lode has been heaved, they have, in almost every part of the mining districts, precedents by which they are enabled to form a tolerably correct judgment on the subject.

The most abundant substance in veins is crystallised spar, termed veinstone, or the leader of the lode; the veins are distinguished by names, according to the nature of the veinstones. The following are the principal:—1. *Gossan*, when the veinstone is clay, mixed with silica, and oxide of iron. Its colour varies from light yellow to deep brown. This is the most common veinstone, and is considered as promising, both for copper and tin.—2. *Spar*, when quartz predominates; it is rather unpromising.—3. *Mundicy*, when iron pyrites abounds; it is considered as rather promising.—4. *Peachy*, when the veinstone is chlorite; it is more promising for tin and copper.—5. *Flookany*, when one or both of its sides is lined with bluish white clay.—6. *Capely*, when the veinstone is a hard substance of a greenish or brownish colour, chiefly a mixture of chlorite and quartz; tin is found in it, but seldom copper.—7. *Prian*, when the ore is found in detached lumps.—8. When a vein abounds in blende it is called a *black jack lode*; when it contains granite it is called a *growan lode*. Tin and copper lodes generally run east and west, and lead lodes north and south. The veins in Cornwall have no determinate size, being sometimes very narrow, or exceeding several fathoms in width; extending sometimes to a great length and depth, or terminating after a short course in either direction. Their width varies from that of a barleycorn to 36 feet, only one, however, has been found in Cornwall of the latter width, and that for only 20 fathoms in length, in Relistian; the average width may be stated at from one to four feet. As regards their form, they are occasionally, though rarely, contained within parallel and regularly-inclined sides or walls; but are continually varying in width, both on the line of their course and of their inclination, partaking often of the same undulating, and even curved form of the rocks which they traverse; moreover, they are accompanied on either side by innumerable branches, which extend in various directions. And, lastly, a parallel series of veins frequently meet a cross vein, either on the line of its course, or of its dip; some of these veins continue their direction on either side of the cross-vein, whilst others, on the opposite side of the cross-vein, abruptly disappear on the line of their original course, and are often found at some distance therefrom, but running in a parallel direction.

Veins vary very much in their composition; in general they consist entirely of earthy minerals, which, indeed, even when the veins are metalliferous, constitute the greater part thereof, the ores seldom being continuous for any considerable distance, but being scattered and disseminated throughout the matrix in short irregular veins, layers, branches, granules, crystals, and smaller forms; sometimes indeed, but rarely, except in very small veins, the ore entirely prevails.

On the kindly appearance of lodes, Mr. Henwood says, "All the harder rocks in the mining districts are quartzose, and whether they are granite elvan, or slate, this character is unfavourable. A distinctly crystalline structure of granite, and their slaty texture, and high inclination in slate, (killas) is also discouraging, but a soft nature, both in granite and slate, and in the latter, the moderate thickness of the beds, and the slight inclination of the laminæ, are encouraging features. The veined and bedded structures of lodes, and their frequent curvatures, are not inviting, neither are they rich when having a flat underlay. The quartzose, and generally speaking the smaller portions, are not so rich as those which consist of softer materials, and are of larger size. The occurrence of gossan in the superficial parts, and the frequency of bunches of ore near cross veins, are generally considered beneficial."

[*To be continued in next week's Mining Journal.*]

* TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The growing importance of the mining interests of this country have, as you inform me, called for this, the third edition of the *Compendium of British Mining*; and I regret that time will not allow me to do more than simply superintend its progress in the columns of your Journal.

Previous to the publication of the first edition as an entire work, in 1843, the press, "which furnishes so profusely matter, both elementary and practical, on almost every subject," was so barren on this head, and mining affairs were so little understood beyond the mineral districts, that, however imperfect the work was, it filled up a desideratum, and was the means, I believe, of calling the attention of hundreds to the pursuit of mining, who would not otherwise have known of its importance.

I feel, however, that *now* something more than was originally published is required; and being unable, through various circumstances, to furnish that "something" myself, I hope your correspondents may be induced to turn their attention to the subjects treated of, so that discussion may bring forth what I have been unable to supply.

St. Michael's-alley, Jan. 1, 1851. J. Y. WATSON.

PROGRESS OF MINING IN 1850.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Mr. Watson's list of dividend-paying mines, in your last Journal has induced me to dissect the Share List on the page that preceded it, and the following is the result:—232 mines are working for copper, tin, and lead in the counties of Cornwall and Devon, and only 42 yielding any dividends (Lovel is omitted, not being in your Share List):—

In Devon, 35 mines are at work, 3 only paying dividends—viz.:				
Great Devon Consols	£40,960	Wheal Friendship	2,880	
Bedford United	3,000			£46,840
In East Cornwall, 76 mines are at work, 8 only paying dividends—viz.:				
East Wheal Rose	£16,000	South Caradon	£ 384	
Fowey Consols	1,976	Trehane	896	
Mary Ann	5,632	West Caradon	1,920	
Par Consols	12,800	Wheal Trelawny	5,720	45,328
In West Cornwall, 54 mines are at work, 14 only paying dividends—viz.:				
Alfred Consols	£ 2,048	St. Ives Consols	£ 282	
Balleswidden	2,844	Spearne Consols	746	
Botallack	1,000	West Providence	1,024	
Levant	4,000	Wheal Margaret	3,136	
Lewis	500	Wheal Reeth	3,000	
Penzance Consols	128	Wheal Tremayne	3,328	
Providence Mines	2,570	Wellington Mines	1,024	25,630
In Gwennap, 11 mines are at work, 4 only paying dividends—viz.:				
Comfort	£ 768	Treviskey	£ 8,760	
Great Consols	960	United Mines	1,000	11,488
In Illogan, 16 mines are at work, 6 only paying dividends—viz.:				
Carn Brea	£ 9,000	heal Basset	£14,080	
North Basset	3,000	uth Frances	11,098	
North Pool	12,750	Tincroft	3,150	53,078
In St. Agnes, 10 mines are at work, 1 only paying dividend—viz.:				
Wheal Friendly				500
In Redruth, 15 mines are at work, 2 only paying dividends—viz.:				
South Tolgus	£3,712	Wheal Buller	£13,114	16,826
In Camborne, 15 mines are at work, 4 only paying dividends—viz.:				
Condurrow	£1280	Stray Park	£3000	
North Roskear	2800	Wheal Seton	5940	13,020
232 working, 42 making dividends				£212,710

RECAPITULATION:

Devon Mines, paying dividends	1	out of	11½	working	£46,840	
East Cornwall	„	„	1	„ 9½	„	45,328—£92,168 out of 111 mines.
West Cornwall	„	„	1	„ 4	„	25,530
Camborne	„	„	1	„ 3½	„	13,020
Illogan	„	„	1	„ 2½	„	53,078
Redruth	„	„	1	„ 7½	„	16,826
Gwennap	„	„	1	„ 3	„	11,488
St. Agnes	„	„	1	„ 10	„	500= 120,542 out of 121 mines.
Total						£212,710 out of 232 mines.

Now, I think no one will venture to contradict, when I assert that the remaining 32 Devon mines have expended and lost considerably more than the 3 have gained in the past year—therefore, we will call that account square, for the moment.

East Cornwall's 68 other mines would exhibit a similar balance-sheet, if one could possibly be procured. Wheal Venton, Chiverton, and Butterdon may look promising for lead; but there are a sorry lot of "bad'uns" strung up on that list, working more to catch the silver and gold from those who only look on the gilded side of the picture.

I take my station at Truro, and say that the western list stands in a far better position generally, though there are lots of catchpennies to guard against. I dislike puffing advertisements about "*dividend mines, paying from 15 to 40 per cent.*" You have a respectable long list of brokers in your paper every week; let them eschew it in future, their names and offices ought to suffice. Experience has shown that many mines paying large dividends one year are blanks the next, just as Mr. Watson most opportunely specifies—"Great Polgooth, 5504*l.* in 1849," and *nothing for* 1850. Now I will go further, and state they are in debt, and have never been in a situation to fairly make a dividend during the whole time they have been at work; and whether or no it was done (as roundly asserted at St. Austell) to rise the price of shares and sell, I leave them to prove. I fear I shall trespass on your patience if I go further at present. Let me conclude by assuring every shareholder and sharebroker, that I mean nothing personal or injurious to either of them; and, if mining success depended on my award, *every shilling honestly embarked should reap a golden reward.*

Truro, Jan. 1. ARGUS.

ON THE GEOLOGICAL FEATURES OF THE TAVISTOCK DISTRICT.

SIR,—It is at all times interesting to those conversant with, or even interested in, mining speculation, to see any hint thrown out by practical or professional men on the geological features of any particular district. It draws their attention, and causes them to watch for every opportunity to test it, which often brings out facts that would otherwise have remained buried in oblivion for centuries. These things should, however, at all times, be taken up in a friendly spirit, and discussed on their real merits, especially when we see how many have spent fortunes in attempting to explore the hidden treasures of the earth, and have afterwards found themselves in the same position as at first. We have only to console ourselves with the reflection that, if we have not discovered anything, we have stirred up others to do so; and here I would remark, that I was highly pleased, on perusing your Journal of the 14th inst., to see the favourable report on East Wheal Russell Mine, accompanied, as it was, with a few hints on the geological features of the Tavistock district; and, more particularly so, from its touching on Wheal Maria, the well-known "queen of trumps." The remarks of the writer, I have no doubt, are well worthy of attention, and, if followed up, will lead to beneficial results. Mr. Hitchins first says that the clay-slate, high in the series in this district, is well known to be rich in copper, which is to be taken as the true bearing stratum; while the under series is unproductive, yielding but little copper. This is certainly valuable information if authenticated, and I am not inclined to dispute his views on these points. He then describes Wheal Maria lode as being a large and single one in the clay-slate of the upper series, running about east and west, with a south declination of about 1 foot in a fathom, which may be termed a beautiful underlay. It is also intersected with many cross-courses, underlaying east, and the strata dip east also; but he omitted to mention the declination of the cross-courses east, and more particularly the dip of the series, or layers, of this highly metalliferous stratum; and I would ask if the cross-courses are dipping east faster than the layers of the stratum, or is the reverse the case? as I am quite sure, without seeing them, that the most productive cross-courses are not running parallel, nor dipping at the same angle as the beds, or layers, of the stratum—*i. e.*, the cross-courses that the large bunches of ore have made. He next remarks, and I have no doubt justly, that the lode is found most productive when its bearing turns suddenly a few degrees more northerly, which proves clearly that the cross-course and stratum then meet the lode at a more favourable angle than when running in a more westerly direction, and I only regret that he was not a little more explicit on this point, which is one that should never be lost sight of by practical miners.

From what I can gather from the letter in question, and from Mr. Murchison's ground plan, Nature appears to have favoured this spot with everything congenial to, and suitable for, forming immense metallic deposits. From the writer's observations, I believe the stratum is found nearly at right angles with the lode. I would also ask if it is coming nearer to a right angle, or is it going further from it when the lode turns more northerly, and produces the ore, as I never met with many copper lodes crossed with right-angle strata? Will any of your readers be kind enough to give the particulars of some other productive mine, where the lode was crossed by right angle-strata, or are they "few and far between?" These things are worthy of attention, as it appears that the development of the riches of this mine was suspended on a very nice point—such as the lode turning a few degrees more northerly, which had apparently the effect of calling Nature's laws into active operation, producing this extraordinary mass of copper. This turn of a lode is not new to me; I have often noticed the occurrence of the same thing, and I believe it to be a far better guide than promising gossans on the backs of the lodes—indications which I regard as very *deceptive* and *uncertain*. There is not one in fifty gossan backs that lead to large deposits of copper, although I admit that there is not one lode in twenty in Devon and Cornwall producing large quantities of copper that has not strong backs of gossan; still it is not a sure guide. The great bulk of gossan is produced from iron and water, and the presence of copper is not required in its formation. It is found more or less in nearly every lode, and these lodes, which appear to have a back of capel, were once gossan, and have now become more dense and hard.

It is my impression that ores are only produced in lodes where their direction and declination meet at favourable angles to other lodes and strata, and where the cleavages, or cross edges, bring the drainage into the lode, when the separate substances meeting the magnetic current, or gases, passing through the lodes unite, and a chemical action takes place, which is the real origin of all the different metallic substances found in lodes. The writer I refer to very fairly admits that the upper series of this district is favourable to the formation of copper, and the under series not. If so, I ask in what way it could aid the lode, unless it brought in something to support it? Under such circumstances we might reasonably expect to find the lode most productive when it met the strata in such direction as to allow it to send in its surplus supply of fluxes freely through the cleavages or the cross heads. Cross lodes often bring in a free drainage of the strata, and cause ore to form in one mass. Parallel lodes, when near each other without intersections, seldom have more than one lode productive, and that in nearly every case is the one that takes the first run from the stratum. The writer having also admitted the productiveness and unproductiveness of the upper and lower series, it would be very interesting to many of your readers, and more particularly to the shareholders, if he could ascertain the difference in their component parts, and tell us if the unproductive series will come in shortly, and unbottom the ore; or is she likely to continue 50 years in the productive series?

I cannot close this letter without remarking on the continuation and parallelism of lodes, too often alluded to in prospectuses by parties bringing out new mines, and would ask what benefit can they expect to derive from either, even if the distance did not exceed 100 yards, unless they can prove that it is in the same stratum, and the lode forming the same, or a more favourable angle to it, with nearly the same cross lodes? Even then much would depend on the density of both lode and stratum. Such statements are valueless, and only calculated to deceive the public, and it is highly discreditable in any practical man to put them before the public, with our present knowledge of mining operations. N. ENNOR.

Wiveliscombe, Dec. 24.

THE STRAY PARK MINES—MINERS' WAGES.

SIR,—On looking over the statement of the accounts submitted to the Stray Park adventurers at their last meeting, as published in the *Mining Journal* of the 21st inst., I find that the earnings of the miners employed in that concern in Sept. and Oct. were—for tutworkmen 2*l.* 5s. 6d., and for tributers 2*l.* 3s. 6d. per month, which average you have pronounced extremely good. In giving this opinion, I hope you did not intend any covert reflection on the agents, as it might happen, where all the work is done on contract, the takers might occasionally get very high wages, owing to a combination of favourable circumstances, baffling the strict vigilance and economy of the shrewdest superintendents, which may have been the case in the instance referred to. I imagine, however, that, should such a thing occur again, the agents will lay themselves open to rebuke; and for the guidance of the uninitiated, it would be desirable to know what would be considered fair wages for the miners of Cornwall. It should be borne in mind that men employed underground are, for the most part, deprived of the light of the sun six days out of seven, and that their vocation is a most perilous one; they stand in jeopardy every hour; that those who escape fatal casualties, owing to foul air, powder smoke, choke-damp, and other abominations connected with subterranean labour, do not live out half their days, and not unfrequently close a life of privation and suffering in a workhouse.

It would be desirable also to know the wages of miners in collieries and iron mines, and of labourers in copper and iron smelting-works. I apprehend that all who have a thorough knowledge of these matters will agree with me that Cornish miners, working at a depth of from 150 to 300 fms., suffering all the ills and inconveniences I have named, are fairly entitled to the same rate of remuneration as these; but if the circumstances of the copper mines will not admit of anything better being done for our

poor fellows, then I say they should not be insulted by any such averages as the Stray Park one being paraded before their eyes. I do not mean to insinuate that Stray Park is the lowest—I have reason to believe it is not; but, then, other parties, as I think very prudently, keep such matters to themselves.—NICHOLAS VIVIAN: *Dec.* 27.

SPEARNE CONSOLS MINE.

SIR,—I have received an anonymous notice from St. Just, in Cornwall, of which the following is a copy:—

"CAUTION TO BUYERS.

"Inspect Spearne Consols: the mine is not as reported, but poor.
"*St. Just, Dec.* 30." "A MINER."

Being acquainted with this mine only through the medium of your Journal, I beg you will insert the above for the information of the mining public; for, although anonymous communications on any subject are generally regarded with suspicion, the advice to "*inspect*" gives a stamp of earnestness to the notice of our friend from ST. JUST—so much so, that I think it would be *unjust* to him not to make it public.—JAMES CROFTS: *King-street, Cheapside, Jan.* 2.

SIR,—I am in receipt of an anonymous letter, written in a *disguised* hand, and signed "A Miner," from St. Just, referring to Spearne Consols Mine. I beg to inform you, had the writer's name been attached, its contents would have met with attention. As it now stands, I cannot but think it a base attempt to do an injury to the adventurers in a regular dividend-paying mine, and hence not worthy of notice. I avail myself of your columns to draw attention to the matter, which evidently has for its object the infliction of an injury, without the party being bold enough to give his name. A SHARE-BROKER.
London, Jan. 2.

THE DALRHIEW MINE.

SIR,—A paragraph appeared in your last week's Journal, in which it is stated that this company *was formed* for working copper and lead mines in the township of Builth, near Rhayader, Brecon. I beg to state that no such company has ever been formed, nor has any step been taken for that purpose, except instituting a preparatory survey by an experienced mining captain, at the nomination of individuals wholly unconnected with the proprietary, with the view of purchasing the sett, and of carrying out the works on an efficient scale. The surveyor's report has not yet been received, but every confidence is felt that the Dalrhiew's main copper lode (it has other copper veins, and a large lead lode) will be found to be an ascertained continuation of the Nant-y-Car's rich lode, the produce of which will be in the market early in the spring. The Dalrhiew will, therefore, be started, if at all, as a legitimate undertaking, not as a scheme based on a merely speculative spirit, and it will be worked efficiently.—G.: *January* 3.

GREAT WHEAL MARTHA—GREAT WHEAL SHEBA.

SIR,—Whilst perusing your valuable paper, a few weeks since, I observed an advertisement, stating that some respectable parties had commenced operations at this mine, and that any of the late adventurers who felt disposed might have shares in this undertaking by applying to Mr. Diamond, the purser, residing near Tavistock. I am one of the late adventurers, and should have no objection to take a small part, provided the parties are, as stated, respectable. Can you, therefore, inform me who they are? On visiting, a short time since, an adjoining sett—the Great Wheal Sheba—I found to my astonishment that the western part of the previous Great Wheal Martha sett had been secured by the Wheal Sheba Company, and added to their most promising undertaking. The Great Wheal Sheba Consolidated Mines, from whence are now raising large rocks of black and yellow copper ore, and the lode in the bottom of the level, I am informed, increases in quality in going down. I happened also to know that in the western part above alluded to, and now belonging to Wheal Sheba, is that great gossan lode opened on by a shode pit, and found to be about 12 to 14 ft. big, all gossan. This, by several competent judges, is thought to be the same lode now so productive in the Wheal Maria setts. I suppose, therefore, that the present Wheal Martha Company were ignorant of this important fact. Several of the late Wheal Martha adventurers have visited the Wheal Sheba sett, as well as myself, and have manifested much surprise at seeing the quantities of ore now throwing up, and in course of dressing, and how it was that the late captains overlooked such course of ore, having worked on the same lode in their adit, from the back of which the above-mentioned ore is now raising. Being with others one day at Wheal Sheba, a question was put to Capt. Spargo, the captain of Wheal Sheba, how this course of ore was not discovered by the Wheal Martha agents? His answer was, that this lode, like some others, sometimes made what is termed "splices," and this shows a false wall, and no doubt had misled the Wheal Martha agents in not sufficiently attending to the cause—that the lode in the present end was near a cross-course, underlying west, and the dip of shelf bearing down on the lode caused the fractures in the vicinity of the lode to be filled with quartz, &c.; consequently, without a strict and minute examination, this cause of Nature will baffle the most practical miner—such causes having so great a tendency to disorder the walls of the lode.

With respect to Wheal Martha, I am of opinion that, with economy, practical agents, and proper management, it will ultimately prove a profitable speculation. Capt. Spargo is of opinion that the lode recently cut in Lamberoue must pass through Wheal Martha sett; but did not think, in the present strata, the lode would be productive; and was of opinion in a deeper level a more congenial strata would predominate—the present being only a cap, overspreading a much more favourable country, where a considerable deposit of ore may be expected. From Capt. Spargo's long experience as a practical miner, and his geological views and knowledge in reference to mining, I am led to place a considerable degree of confidence in his statements and opinions, which is still strengthened by his having been called on to inspect and report on a great number of mines; among the number—Herodsfoot, Holmbush, Callington Mines, and the Great Phœnix; his statements respecting which have proved real facts. There are many others also holding forth most favourable prospects of remuneration—such as the Great Rough Tor Consols and the St. Vincent Mines, in the north-east districts; the result of his exertions to set to work—AN OLD ADVENTURE: *Callington, Dec.* 31.

WEST NANT-Y-MWYN AND BROMFLOYDE (South Wales).—The Cornish adventurers in these mines met the deputation (which had just returned from inspecting the property) at the Royal Hotel, Truro, on Saturday last. The deputation very fully and most satisfactorily explained the result of their visit; in doing which, they were assisted by producing numerous rich specimens of silver-lead ore from each mine. In West Nant-y-mwyn, three of the adjoining Nant-y-mwyn lodes had already been cut, containing lead, and other favourable appearances, uniform with the same lodes in the celebrated Nant-y-mwyn. Levels will be forthwith driven into the mountain on the course of the lodes, and machinery will be erected for dressing the ores, &c. No pumping-engine will be required. At Bromfloyde, which adjoins Daren and the other Goginan Mines, a cross-cut had been driven, which intersects the lode at about 12 fms. under the surface. Here the lode produces lead from each end, and about 3 tons have been broken therefrom within the last few days. The eastern end is daily improving, and is at present worth 16*l.* per fm. It was a right pleasant meeting for all; and, probably, few parties have had better reason to be so well pleased with such rapid and favourable results.

TRELYON CONSOLIDATED MINES (comprising Wheal Margery and Wheal Venture tin and copper mines,) are situate in the parishes of St. Ives and Lelant, in the county of Cornwall. These mines are divided into 150 parts, or shares, conducted on the Cost-book System, and held for a term of 21 years. The part, formerly known by the name of Wheal Margery, comprehends within its limits nearly 500 fms. in length, and 200 fms. in breadth, and has within its boundary three east and west lodes underlaying south, and two north and south lodes underlaying west, in a rich brown and white mineral killas, adjoining to granite on the west, at which junction large quantities of mineral are found in this district. Wheal Margery is situate in one of the most productive tin and copper districts in Cornwall, and adjoining the celebrated mines called Providence Mines, Wheal Laity, and Wheal Venture on the south, about a mile distant from Wheal Trenwith and St. Ives Consols on the north, and about a mile distant from the productive mines of Wheal Reeth, Wheal Reeth Consols, Wheal Margaret, Balnoon, and Wheal Mary on the west—all of which have returned large profits to the adventurers, and are now in a full state of working. Wheal Margery was partially worked about 80 years ago by a small pressure engine, and is said to have produced from 70,000*l.* to 80,000*l.* profit to the adventurers. We have cleared up the westernmost shaft on this lode, and driven some fathoms in the 60 fathom, or sea level, where we have broken and returned about 50 tons of copper ore, averaging from 6*l.* to 7*l.* per ton. As we go west we have all whole ground; but eastward, the ground, 360 fms. long, is all removed by the former adventurers, proving that much mineral must have been found. We are also driving the 30 fm. level, which presents indications of our near approach to the run of ore which is in the 60. It is stated by several old miners who worked in this mine that large quantities of tin and copper ore are now to be found under the deep adit level, east of Wheal Comfort lode. Wheal Comfort lode is one from which so much tin has been raised in Providence Mines, and crosses this sett. The south lode also produces rich copper ore near the cliff, imbedded in white killas—a stratum of ground well known in Cornwall that seldom or never fails to produce large quantities of mineral. It may be proper to remark that the local situation of Wheal Margery is very desirable—being one mile south of the port of St Ives, and three miles north of Hayle, from either of which ports supplies may be obtained at a reasonable rate of carriage, and the produce exported on very advantageous terms. Wheal Venture is 1½ mile south of the port of St. Ives, and three miles north of Hayle, and adjoins Wheal Margery, and might be worked by the use of flat-rods from Wheal Margery engine, if required. Both these mines are now working, and producing some tons of tin and copper monthly: 24 tons of copper ore are sampled, being two months' produce, for sale on the 9th inst. at Redruth. We shall be increasing a quantity very considerably as we continue opening more ground. The only water charge is 5*l.* per month in Wheal Venture, where we keep the water by means of a horse engine, 34 fms. below the adit, or 44 from surface. Wheal Margery deep adit is within 150 fms. of Wheal Venture sett, and could be extended into that mine, which would come in full 30 or 40 fms. under the present working, and would unwater five east and west, and two north and south tin and copper lodes, all imbedded in a fine mineral granite. From the 34 fm. level we have driven northward 20 fms., and expect daily to cut another tin lode, as the end has become very wet. The 34 fm. end west is still looking as good as ever; and we have an excellent lode in the sump.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode in No. 2 winze, sinking under the 70 fm. level is about 4 ft. wide, worth from 70*l.* to 80*l.* per fm., and is 7 fms. below this level, but we think we shall not be able to sink it deeper until the 80 fm. level is extended further east to drain the water. The stopes over the back of the 70 fm. level, east of said winze, are 9 ft. wide, worth from 130*l.* to 150*l.* per fm. The lode in the 70 fm. level, east of Field's engine-shaft, is, so far as opened, from 5 to 6 ft. wide, worth 40*l.* per fm., but we are still opening on the north, and have not yet discovered the north wall. The lode in the winze sinking under the 60 fm. level, west of Wyld's shaft, is from 10 to 12 ft. wide, worth at least 150*l.* per fm. We expect Wyld's shaft will be communicated to the 60 fm. level by the middle of next week. There is no change to notice in any other part of these mines since the last report.

BALNOON CONSOLS.—The prospects of this mine are still better than last reported. The lode in the shaft is considerably improved since then; it is now worth 50*l.* per fathom. Considering the depth, which is only about 13 fms. from surface, this is most extraordinary, and speaks a great deal for the future prospects of the mine.

BARRISTOWN.—The ground in the cross-cut is still favourable for driving, and is much the same in character as last reported. The lode in the end east is without alteration, being small and poor.

BODMIN MOOR CONSOLS.—I was down to St. Austell on the 27th inst. with the first batch of tin from these mines, and it proves to be of a most excellent quality—it fetched 51*l.* per ton; it will improve much more as it gets down. They said I must bring down some more as quickly as possible. All were well pleased with the sample, so there is no mistake about the quality or quantity.

BODMIN WHEAL MARY CONSOLS.—The engine-house for the 50-in. cylinder engine is completed. The 16½-in. cylinder engine was put to work yesterday, and is capable of lifting 270 gallons per minute to the adit. We shall soon have the water out of the shaft, and then we shall commence opening the lodes in the 10 fathom level, as the killas is very favourable for driving. We shall soon open ground for the tributers in that level. We shall also set the shaft to sink from the 10 to the 20 fm. level. Yesterday being setting day, some of the tribute pitches were re-set in the adit level.

BORRINGDON PARK.—Since my last report, we have fixed our machine and air pipes, and commenced clearing the adit level—we have cleared about 3 fathoms. In consequence of the run pooling back the water, we are not able to do anything more in the shaft until the adit level is cleared.

BRYN-ARIAN.—The lode in the 10 fathom level is large, containing small bunches of ore. The winze sinking under the deep adit level west is in a large lode, with a strong mixture of ore. The stope in the back of the 10 fm. level west is yielding about 10 cwts. of ore per fm., and the stope in the back of the deep adit level west will yield 15 cwts. of ore per fm. The wheel-pit at Pensarn is finished, and we are getting on rapidly towards the completion of the wheel. The bob plat at the adit is completed, and we shall now commence to draw the stuff. Quantity of ore same as last reported.

CALLINGTON.—The lode in the 125 fm. level north is 10 in. wide, composed of soft quartz and stones of lead ore, leaving ground in the back and bottom of the same that will leave a profit when wrought; the same remarks will apply to the lode in the south end at this level; the diagonal shaft, below the 125 fm. level is for the present suspended, and the men set to cut a bob-plat about 5 fms. below the 80; after it is completed we shall fix the bob, attach rods and puppy lift, &c., to keep the water, which is too quick to enable us to sink with barrels. The lode in the 112 fm. level south is 12 in. wide, producing saving work. The ground in the counting-house shaft is favourable. No lode has been taken down in the 112 fm. level, north from the south engine-shaft, since last reported on, but the wall of it is very regular and compact, and I think it will turn out a productive one when removed. The ground in the 50 fathom level cross-cut, north from Kelly Bray shaft, is favourable, and there is a pretty deal of water issuing from the end. We have not yet ascertained the size of Kelly Bray lode; in the rise above the back of the 70 we have been obliged to take out the stall pieces of timber to cut into it, which were headed against the lode; already we find it 6 feet wide, nearly all copper ore of good quality, and specimens from the same, as well as some from Johnson's lode are sent you by this post. The present rise is only 7 feet long, and we have set a bargain to 9 men, to make it 14 feet long by the width of the lode, which, I calculate, will produce from 10 to 15 tons of ore; observing such a lode 3 fms. above the 70, induced me to examine the 90 fm. level, east of the great cross-course, said to be on the same lode, if so, there is a mighty change for the worse—it does not look like it, for it resembles more like a dropper or branch from it than the lode; besides, this level is comparatively dry, whilst the 70 fm. level is very wet indeed, and in the present end there is only a small flookan, branch, or division, which is very unlike the lode in the 70 in every respect, and that for a great length; also the heave by the cross-course, which is 10 fms. wide, is 3½ fms to this branch, whereas the same cross-course has the Holmbush copper lodes 9 fms. The average size of the lodes in each mine is just the same, and the direction; but there is this exception, that all the east and west lodes in Callington Mines dip south, and all those lodes in Holmbush Mine dip north; this may effect the difference in the distance of the heaves. No one can state positively there is another part of the Kelly Bray lode further north at the 90 fm. level; but for the above reason I think it would be wise and prudent to extend a cross-cut a few fms. in that direction to prove it, for it can be accomplished for little money, seeing the ground is favourable, and if no lode is intersected the loss would be but trifling, at the worst of it, and the mind satisfied. I beg to refer you to the setting list for the several bargains on tutwork and tribute. We are preparing floors, houses, &c., for dressing the copper ores, and no time shall be lost on our part to prepare and bring to market a parcel of it, if the course of ore continues, which it has every appearance of doing.

CALSTOCK UNITED.—The year closes on this concern with more favourable prospects than pertain to any adventure so recently commenced. The mine was set to work in August last, but little was done until September; and now, within three months, we have tribute pitches set wherever the works are sufficiently advanced to allow it, and on Saturday the new ones have been taken much better than even the captains anticipated; whilst from our southern lode we have made one shipment of ore, the bill for which has been duly received. The ore in course of raising from Wheal Goodluck is very rich—in short, the stones are nearly all tin; whilst from the southern lode we have a deposit which will require years to take away. Reviewing the whole of the developments which have already been made, it leaves no doubt the directors will be in a position to pay dividends early in the ensuing year.

CRADDOCK MOOR.—Since the last meeting we have driven east on Dunstan's lode, at the 20 fm. level about 6 ft.; this lode is 2½ ft. big, composed of peach and quartz, spotted with ore throughout—its underlie is about 3 feet in a fathom; but our principal operation has been to cut Vivian's lode, which we have done, and driven east on its course 7 to 8 feet; this lode is 2 ft. wide, composed of fluor, spar, and yellow copper ore, and will produce 1 ton of good quality ore per fm.; it is about 7 to 8 fms. north of Dunstan's lode; at the 20 fm. level its underlie is 1½ to 2 feet per fm. We have two men to drive on the cross-course, to cut the western heave of this (Vivian's) lode, and six men driving east on its course.

DEVON AND COURTENAY.—The lode in the 60 end east is 3 ft. wide, and has a very promising appearance; it is composed of peach, mundic, prian, and spotted nearly throughout with copper ore; the west end, in the same level, is producing occasional stones of ore; but the ground is hard, and I do not expect it will be worth much until we have got through the channel of poor ground seen in the 40 fm. level, and reach the ore ground to the west side of it. The lode in the rise in the back of the 40 fm. level is about 20 in. wide, and although not rich at present it will be all dressed. I think there is a great prospect of an improvement.

EAST BALLESWIDDEN.—Since our last report, the carpenters and surfacemen have been getting on well with the work for the wheel, and the miners are getting the engine-shaft in good order for the underground work. We shall be able, in a few days, to drop our lift under the adit level; and as soon as the wheel is complete, we can begin our underground work.

EAST SHARP TOR.—Since my last we have intersected a wall on the north part of the shaft, which I am of opinion is the north wall of the lode; however, we have not as yet cut sufficiently into it to enable me to speak with certainty. A few days more will determine whether it is or otherwise. So far as cut into (12 in.) the ground is a mixture of elvan and killas. The lode to the south of this wall continues kindly, producing promising capels, intermixed with spar, quartz, spots of mundic, and yellow copper.

EAST WHEAL GEORGE.—To-day (Dec. 27) being our usual monthly setting, I beg to send the particulars thereof. The ground in the engine-shaft is without alteration; the shaft is sunk about 9 fms. 3 ft. below the 12 fm. level. The lode in the 12 fm. east is 1 ft. wide, composed of mundic, peach, and spar, let to 6 men at 3*l.* per fm. The stopes in the back of the 12 fm. level, west of Crowl's rise, is let to 2 men at 1*l.* 10s. per fm.—worth 16*l.* per fm. The stopes in the back of the 12 fm. level, west of Stephen's winze, is let to 2 men at 1*l.* 15s. per fm.—lode producing fair work; this stope is now also in Adams's land. We have got a good pile of work at the surface. We are busily engaged in preparing another parcel for the market, which will be got ready against the usual time for sampling

EAST WHEAL JOSIAH.—The lode in the adit end south is without important alteration, about 2½ ft. wide, underlaying east about 15 in. in a fathom, composed principally of flookan, spar, mundic, and spots of yellow copper ore in places—the ground in which is very soft for driving, with a pretty footwall, indicating that we are getting near the east and west lode.

ESGAIR LLEE.—Our setting was on Dec. 28, of which the following is an account:—The deep adit east of Morgan's winze, on the caunter lode, by six men, 4 fms. stent or the month, 3*l.* 15s. per fm.; the lode is improved since my last, being 3 ft. wide, with a mixture of ore throughout, and has a very promising appearance, yielding six or eight bushels of ore per fm.; this is the first ore of any account east of the slide, and the lode is again taking its regular course. The 12 fm. level east of Morgan's winze, on the south caunter lode, by six men, 4 fms. stent or the month, 4*l.* per fm.; the lode in this level is also improved sincemy last, yielding 8 or 10 cwts. of ore. The stope in back of the deep adit, west of Morgan's winze, by four men, 8 fms. stent or the month, 2*l.* 5s. per fathom. The stope in back of the same level, west of the above stope, by four men, 8 fms. stent or the month, at 2*l.* 7s. 6d. per fm.; the lode in these stopes, on an average, will yield about ¼ ton per fm. The stopes in back of the 12 fm. level, east of Morgan's winze, by four men, 8 fms. or the month, at 2*l.* 10s. per fm. The stopes ditto, west of Morgan's winze, by six men, 10 fms. or the month, at 2*l.* 10s. per fathom. The stopes in back of the 12, east of Harding's winze, by four men, 8 fathoms or the month, 2*l.* 4s. per fm. The lode in the three stopes will, on an average, yield about ¼ ton of ore per fm. The stopes in back of the deep adit, east of Owen's winze, and in back of the 12 fm. level, west of Harding's winze, remain unset; the former put up at 2*l.* 10s., and the latter at 2*l.* 4s. per fm., and for want of hands the bargain in the western mine is not yet set. We consider the present promising appearance of the lode in the deep adit east of the slide, also in the level above, to be at present encouraging. We have introduced a new system in saving the work—to have the rough waste, or poor, taken from the work underground, and put to stull, and the takers of the bargain are to pay for same. This will not only effect a saving in the tramming, but a very material one on the dressing-floors. We are getting on with the dressing as well as the rough weather will admit, and if it remains open another week we shall be able to sample about 20 tons of ore, which would leave us a profit on December.

GONAMENA.—The 80 fathom cross-cut is driven north from Gilpin's lode 23 fms. We have 10 fms. more to drive to cut Taylor's lode. The 80 fm. level, east on Gilpin's lode, is driven 16 fms.; the lode is 18 in. wide, producing ¼ ton per fm. The 60, east of Gilpin's lode, is producing ¼ ton per fm.; we have a winze sinking in the bottom of this level, which is down 10 fms.; the lode is 18 in. wide, producing ¼ ton per fathom; we have a pitch working in the back of this level, at 12*s.* out of 20*s.* We have four pitches working in the 117 fm. level, on Taylor's lode—two in the back, and two in the bottom of the level—both 10*s.* out of 20*s.* We have 30 tons of ore for sale next sampling.

HAWKMOOR.—The improvement in the eastern end in the 30 fm. level, spoken of last week, still continues, the lode being worth 4 tons per fm. In all other particulars the mine continues as last reported.

HEIGNSTON DOWN CONSOLS.—The winze sinking below the 45 fm. level is down 4 fms., the lode in which for the first 2 fms. sinking averaged 2 ft. in width carrying a good leader of ore on the north part for about 10 or 12 inches; for the last 2 fms. sinking, however, a change for the better has taken place, and the lode is now about 4 ft. large, with good saving work for about 18 inches, which I compute will yield 3 tons of ore per fm. In the 45 fm. level end the lode has been almost unproductive for the last 6 fms. driving, or ever since the last meeting, but is now assuming an improved appearance, being 3 ft. wide, 1 ft. of which, on the north part, I am happy to say is good saving work, with every indication of further improvement. The 35 fm. level has been driven since last meeting 5 fms. 1 ft. 6 in., yielding but little ore for the greater part of the drivage, with the lode very hard. In the present end the lode is now fully 4 ft. wide, with a leader of ore about 10 in. wide on the north part, and the ground to all appearance becoming easier. The cross-cut towards the south lode, driving from the last-named level (the 35), is now extended 24 fms. 6 ft. 9 in., or 4 fms. 4 ft. 9 in. since the last meeting, but no lode has as yet been met with other than a small branch, as alluded to in the report a fortnight since, which is underlaying towards this main or south lode, which we hope to intersect in about two months from this time, supposing no material alteration takes place in the ground. The rise in the back of the 35 fm. level is up about 9 fms., the lode in which for the last 4 fms. has been unproductive. We look forward to the communication with the winze sinking in the level above (the 20) as a means for ventilating the mine, and of expediting our progress at all points of operation. The lode in the 20 fm. level cross-cut is having been reached, the men are now set to sink diagonally to meet the rise on the same lode in the level below, as just referred to. Hitchins's engine-shaft is now down below the 35 fathom level 8 ft., and is being sunk by a force of six men, the ground, however, is hard; the lode is 4 ft. wide, and produces occasional stones of black, yellow, and grey ore, and in my opinion giving unmistakeable evidence of its becoming productive at an increased depth. In the 35 fm. level, west of this shaft, 2 fms. 5 ft. have been driven on the lode, which averages 3 ft. wide, composed of gossan and spar, with a small proportion of yellow and grey ore, very kindly, and from the appearances of it as seen in the level above (the 20) for the few fathoms there driven (about 14) we may reasonably expect, as we advance westward, to meet with ore in larger quantities. We have now about 10 tons of good quality ore dressed up, and should our ends and the winze turn out as is anticipated, we shall soon be able to prepare another small parcel for the market. The engine, and all other machinery on the mine, continue to work well, and a strict regard to economy in every department is carried out, and I must beg to be allowed again to intrude my sanguine opinion as to the successful result of the adventure at an increased depth.

HENNOCK.—We are now cutting the plat, which I hope to have finished by the end of this week, when we shall put in bearer and cistern, fix the new lift, and commence sinking for the 30 fm. level. I have also put the end men to cut into the lode about 5 fms. to the north of shaft, and from what I could see the lode is much softer, and I think a great deal more lead, but it will take us most of the week to get in through it, when I shall be able to report fully on its capabilities.

HOLMBUSH.—The lode in the 132 fm. level, west of the diagonal shaft, is 18 in. wide, producing 3½ tons of copper ore per fm.; the stopes in the back of this level will produce 4 tons of ore per fm; the ground in the north and south cross-cuts, at this level, is favourable. The ground in Hitchins's engine-shaft, sinking below the 120 fm. level, is not quite so favourable as it was. The flap-jack lode, in the rise above the 120 fathom level, is 16 in. wide, producing stones of copper ore. The lode in the 120 fathom level, east of the great cross-course, is 15 in. wide, composed of spar, mundic, and stones of copper ore; the lode in the 120 fm. level south is 6 ft. wide, composed of quartz, prian, and stones of lead. The flap-jack lode, in the 100 fathom level, east of the great cross-course, is 5 ft. wide, producing 6 tons of copper ore per fm.; the lode in the winze sinking below this level is 12 in. wide, producing stones of copper ore. We expect to make a communication to the rise above the 120 this week, and afterwards we shall resume the sinking of the other winze 15 fms. further east, where it will produce 7 tons of ore per fm. The flap-jack lode in the 100 fm. level, west of Wall's engine-shaft, is 2 ft. wide, composed of spar, mundic, blende, and stones of copper ore.

KESWICK.—At Brandley, the 10 fm. rise is not quite so good; the stope is yielding good paying ore, and worth about 12 cwts. to the fathom; the sump in Salt level is rather harder ground. At Old Brandley we have a good vein, with saving work, but the ground is so hard, that we think it advisable to cut through to the laying side, in hopes of finding a wall to work by. At Thornthwaite there is no alteration in the 11 fm. level south; ore worth about 12 cwts. per fm. In the 17 fm. south we have small strings of ore. During the week we have had two men sinking in the sump on vein, so as to meet the men now rising from the 27 fm. level—ore worth 8 cwts. to the fm. In the 17 fm., No. 3 stope, on string, no alteration in the ore. In the bottom level rise the ore is not so good as when last reported. In the bottom level we have, during the week, cut into a bunch of ore, varying from 5 to 6 in. of nearly solid ore, which will yield about 30 cwts. to the fm., or more. The ore appears to be best at the sole of the level.

KIRKCUDBRIGHTSHIRE.—Stewart's Shaft: the lode in the 74 end west is 3 ft. wide, yielding half a ton to the fm. At Keith's, the lode in the 62 end west is 4 ft. wide, with spots of ore.—Gilpin's: The lode in the 62 end east is 5 ft. wide, with a good stone of ore in the back of the level; the lode in this end west is 4 ft. wide, yielding 1 ton of ore to the fm., a very kindly end. The lode in the 50 end west is 4 ft. wide, with a little ore on the south side. The lode in the 40 end west is 4 ft. wide, with good stones of ore. In the 30 end east the lode is 3 ft. wide, with a little ore on the north wall.

LEWIS.—The north lode in the 90 fm. level, east of the engine-shaft, is 2 ft. wide, unproductive; the sumpmen have commenced driving south in this level to cut the other lodes. The north lode in the 80, east of the copper ore shaft, is 18 in. wide, with favourable appearances. The new lode in the 70, east of the tin shaft, is 8 inches wide, worth 4*l.* per fm. On Cock's lode, in the 50, east of the copper ore shaft, there is no alteration since last reported. The new lode in the 40, east from the tin shaft, is 8 in. wide, producing stones of tin; ditto west from copper ore shaft, this lode is 15 in. wide, worth 2*l.* per fm.; the south lode in this level, east from copper ore shaft, is 8 in. wide, opening tribute ground. The new lode in the 30, west from copper ore shaft, is 1 ft. wide, worth 5*l.* per fm.; ditto east of Praed's shaft this lode is 15 in. wide, producing stones of tin. The new lode in the 20, west of copper ore shaft, is 10 in. wide, worth 3*l.* per fm.; the south lode in this level, east of copper ore shaft, is 4 in. wide, producing stones of tin. The tribute ground is looking well, especially in this level.

LLWYNMALEES.—The lode in the 8 fm. west is very promising, and contains some nice little branches of ore, which I think is the eastern end of another bunch or shoot of ore. The 14 fm. level west is much the same as last week. The stopes over the 8 fm. level, from 11 to 20 fms. west of western winze, are much the same; in the western winze, sinking under the 8 fm. level, the lode is not quite so good. In the rise over the 14 fm. level, to meet western winze, we have pretty good ore. In consequence of the water still being in the 8 fm. level, we have not done as much as we could wish; the engine has not done her work efficiently for the last few days. I hope on Monday we shall be again at work in the bottom of London shaft.

PEN-Y-BANK AND ERGLODD UNITED.—The whim-shaft at Pen-y-bank is completed about 20 fms. from surface, and we hope to see the bottom in a short time. The adit level driving east from the cross-cut is at present in a lode rather disordered and poor.

PENZANCE CONSOLS.—Since our last report we have proved ourselves to be correct in stating that one pare of men would break from 50*l.* to 60*l.* worth of tin; and the same pitch is now looking better than it was last month. Our other pitches are also improved, and are looking much better than when last reported on. In our deep ends, going east and west, we have been driving on a good lode of tin, which is still holding away in each end. We are making great discoveries on the lode, which will, next month, enable us to employ a greater number of hands on tribute, which will be of great benefit to the mine.

RUNNAFORD COOMBE.—In presenting you my report of the above mine, I beg to say, the western end at the 10 fm. level is driven from the cross-cut about 7 fms.; the lode has been very much disordered, but at the present is looking more settled: it is 4 feet wide, composed of spar, peach, and capel; it is getting more querey, and water is coming out; these are great indications of a looser lode before us; its underlay is from 4 to 5 ft. in a fm. We are now about 3 fms. from being under the place where Mr. Henderson broke the stone of tin, according to the run in the adit level, and when we get there I expect a good lode for tin, from it appearance gone down in the bottom of the adit level; at present the end is very hard, and has been for the last 7 or 8 ft., but I hope will soon change for the better; the men have 10*l.* per fm. The eastern end is driven from the cross-cut about 9 fms.; since we have been driving this end we have had some good leaders of tin, but at present the lode is poor for tin, though very kindly, about 3 ft. wide, composed of spar, peach, and capel; its underlay is about 4 ft. in a fm. The ground about the lode is very favourable, for which the men have 5*l.* 10*s.* per fm. for driving; from the appearance of the lode now in the end, I think we shall soon get to the branch of tin we went through in sinking the winze, because the tin is dipping that way. On Saturday I took two men from the eastern end and put them stoping in the back of the level, for the purpose of raising tin to ease the cost, though at present the back is not rich, but we shall soon get up to the branch in the winze; then I expect we shall break a good pile of tin for the market, although there are now some small leaders of tin to commence stoping upon. My opinion is still that we shall return great quantities of tin from the backs of the 10 fm. level; and it is my opinion also, that if we were to sink and cut the lode in the 20 fathom level, it would be more settled, and better for tin, than it is at the 10 fm. level, because at the adit level there is fair ground, and it reached to the 10 fm. level within 3 or 4 fms.; the lode might feel from the change, but not enough to injure its size or quality; so at the 29 fm. level the lode would be more settled, and agree with the change of hard ground, and make rich for tin. On Friday we commenced drawing out water from the well at Hawson with three pumps; I had four men and myself, we forked it down about 11 feet and there is about 3½ ft. more to the bottom, but we could not fork it deeper. On Saturday I resumed it with six men, and the pumps were heaving a large stream of water, but we cannot see below the walling; there is more water in the well than there is in our mine. I believe the lode is in this well by the quantity of water—I think that four pumps will not fork it at this time of the year.

SOUTH WHEAL TRELAWNY.—We continue to drive south on the branch we cut in the easterly cross-cut, as last reported, and are in about 8 fms.; it is not quite so large as when last mentioned. We have also intersected a small slide dipping south about 5 ft. in a fm.; it has not heaved the lode; it is very regular. Its also letting down more water, and is composed of spar, killas, flookan, and mundic. The engine continues to work well.

TAMAR SILVER-LEAD.—In the 205 end, driving south from the engine-shaft, the lode is 2 ft. wide, composed of capel and ore; this end has been opening good tribute ground for the last 10 fms. in driving. In the 190 end the lode is small and poor. In the 175 end the lode is 3 ft. wide, passing through ground of a profitable nature. In the 160 end the lode is 2½ ft. wide—6 in. of which is very rich work. In the 145 end the lode is 1 ft. wide, composed of capel and ore, yielding work of a good quality. In the 160 end, driving north and south from Spurgin's shaft, the lode is about 18 in. wide, and opening ground that will set at a low tribute. At the north mine, in the 90 fathom level, we are still cross-cutting west. In the 80 fm. level, driving north, the lode is 1 ft. wide, composed of fluor-spar, with good stones of ore. In the winze sinking in the bottom of the 70 fm. level the lode is 3 ft. wide—1 ft. of which is rich work. We hope to sample, on Saturday, the 4th inst., about 75 tons of rich silver-lead ores.

TINCROFT.—Highburrow tin lode in the engine-shaft, sinking below the 152 fathom level, is 5 ft. wide, worth 12*l.* per fathom. In the 152 east the lode is 5 feet wide, worth 18*l.* per fm, In the 142 fm. level, east of Martin's east shaft, the lode is 4 ft. wide, worth 15*l.* per fm. In the 132 east the lode is 6 feet wide, worth 35*l.* per fm.; in the winze sinking below this level the lode is 5 ft. wide, worth 15*l.* per fathom. In the 120 fm. level, driving west of engine-shaft, on Chappie's lode, the lode is 4 ft. wide, worth 12*l.* per fm. In the winze sinking below the 100, west of downright shaft, the lode is 6 ft. wide, worth 15*l.* per fm. for copper. In the winze sinking below the 90 west the lode is 6 ft. wide, worth 18*l.* per fm. Grout's lode in the 90 fm. level west is 7 ft. wide, worth 50*l.* per fm. In the 70 west no lode has been taken down since last report. At North Tincroft, the lode in the engine-shaft, sinking below the 110 fm. level, is 4 feet wide, worth 10*l.* per fm. for copper; in the 110 east the lode is 3 ft. wide, with stones of ore; in the 110 west in the same level the lode is 3 feet wide, worth 12*l.* per fm. In the 100 fm. level, east of Willoughby's shaft, the lode is 2 ft. wide, worth 9*l.* per fm. for tin and copper. In the 90 east the lode is 3½ ft. wide, worth 8*l.* per fm. In the 100 fathom level, west of engine-shaft, the lode is 4 ft. wide, worth 15*l.* per fm. for copper. In the

0 west the lode is 2½ ft. wide, worth 9*l.* per fm. for copper. At Palmer's shaft, sinking below the 100 on East Pool lode, the lode is 3 ft. wide, producing good stones of ore. In the 36 fm. level, driving west of Stainsby's shaft, the lode is 2 ft. wide, worth 4*l.* per fm.

TOKENBURY.—Since the last meeting four men have been employed to drive the adit level east on E 3 lode; this lode is 3 to 4 feet wide, composed of mundic and spots of black ore—a very kindly lode. Four men have been driving east on E lode, and we have extended several fathoms on this lode, but the appearances here are not so promising as at E 3 lode. We have intersected two cross-courses, and the lode has been much confused. We would recommend that two men be kept to open on the lode east of the last cross-course. We have also cleared and secured the adit level on Browning's cross-course, and commenced driving south to intersect South Caradon lodes, which are very promising going east towards Tokenbury; in driving on this cross-course 20 fms. further, we shall have 60 fms. backs.

TRANNACK AND BOSENCE.—Since the report of Dec. 7th a winze has been sunk from the adit to the 30 fm. level, between Hampark shaft and the boundary. Hampark shaft is sunk 5 fms. below the 30 on a very promising lode, varying from 4 to 5 ft. wide, yielding some good stones of copper ore, with every indication of its becoming very productive. The lode in the 30 west is 4½ ft. wide, producing good stones of copper ore, with appearances of improvement as the ground is extended west towards the great caunter. The ground in the 30 or cross-cut south is still very favourable, and it is expected the lode will be intersected by about the end of next month. There are three pitches in the back of the 20 fm. level, east and west of Hampark shaft, at an average tribute of 4s. 10d. in 1*l.* At Bosence, in driving the deep adit level north on the caunter lode, it is found to be 18 inches wide, producing good stones of tin. The prospects of the mines are daily improving; and if Hampark shaft can be sunk dry to the 60 fm. level, and extend east and west, the value of the property will be considerably enhanced.

TREBELL CONSOLS.—I went to Trebell on Saturday and paid the men, and was glad to find that in driving the shallow adit south towards the large tin lodes, a lode has been intersected further north than any which had ever been discovered on the surface; its underlay is very little, but that little is south; its size is nearly 3 feet, and, although so very near to the surface, it carries some tin; it seems to be dropping into the large lode, which we expect to intersect in a few more fathoms driving, which (from the appearance at surface) underlies north. This is thought by all hands to be a good indication, and we have every reason to expect tin as soon as we cut the large lodes, which, in fact, all show tin on the surface. Trebell is considered by parties in the neighbourhood to be one of the best setts in the county, both for copper and tin. Capt. Williams is paying every attention, and pushing on the shallow adit with all possible speed.

TRELAWNY.—At Phillips's shaft, the 62 end north being near the boundary is suspended. Trelawny shaft is now down 3 fms. 4 ft. under the 92. The additional lift at Wheal Mary Ann will be put to work in the course of the present week, from which we anticipate some assistance, and hope then to be able to sink this shaft with more regularity and speed than of late. In the 92 end north the lode is 4 feet wide, worth 11*l.* per fm.; in the south end, same level, the lode is 3 ft. wide, worth 9*l.* per fm. In the 82 north the lode is 3 ft. wide, worth 9*l.* per fm.; the lode in the winze in the bottom of this level is 2½ ft. wide, worth 10*l.* per fm. In the 72 north the lode is 3½ ft. wide, worth 10*l.* per fm. At the north mine, we have not yet communicated the 55 south of Smith's shaft with the 55, north of Trehane, but hope to do so soon, when the sinking of this shaft will be resumed. In the 55 north the lode is 1 ft. wide, worth 6*l.* per fm. In the winze in the bottom of the 40 the lode is 1 ft. wide, worth 4*l.* per fm. On the 24th Dec. 100 tons of ore were sold to Messrs. Walker, Parker, and Co., at 21*l.* 10s.—P.S. Since this report was written, the 55 fm. level, in the north ground, has been holed south of Smith's shaft to the 55 north of Trehane, so that the sinking of Smith's shaft will be immediately resumed.

TRELEIGH CONSOLS.—In the 100 fm. level, west of Garden's shaft, the lode is 20 in. wide, with stones of ore. In the 90 fm. level, west of ditto, the lode is 18 in. wide, worth 8*l.* per fm.; in the stopes above this level, east of Harries' winze, the lode is 2 ft. wide, worth 12*l.* per fm. In the 80 fm. level, west of cross-cut, on the north part, the lode is 18 in. wide, with stones of ore. In the 70 fm. level, west of Garden's shaft, the lode is 2 ft. wide, with stones of ore. Parent lode, at Parent engine-shaft, below the 52 fm. level, we are sinking in the country. In the 52 fm. level, east of ditto, the lode is 2 ft. wide, with stones of ore. In the 30 fm. level, east of ditto, the lode is still disordered by the cross-course. Middle lode, in the 40 fm. level, east of cross-cut, is 1 ft. wide, with stones of ore; in the rise above this level, west of cross-cut, the lode is 15 in. wide, with good stones of ore, and is looking more kindly. At Burgess's shaft, below the surface, we are sinking in the country for the middle lode.

TRETHEVY.—Our operations are progressing to my satisfaction; the shaft is put down about 7 fms. below the 30, the lode is gone out of it about 6 ft. above the bottom, consequently I shall have nothing to say about it for some time to come; however, I am happy to state that a more promising lode cannot be found in this part of the country, it is full 8 ft. wide, with a good bunch of ore in it—this was met with just as the lode left the shaft, and I think is the shoot of ore, or the top part of it, that we have in the bottom of the 30 fm. level, about 10 fms. west of the shaft, and I have every reason to expect that it will make a regular course of copper in the 42 fm. level, at which point I expect we shall have need to cross-cut it, as by that time our lift of pumps will be very heavy, and the water will fall heavy on the men from the lode in the shaft. Nearly all the water in the mine falling down in the lode, where it is broke into, is no bad indication, and, with other good ones, fully warrant us a great and a good mine. There is one thing more to be borne in mind, that only 7 fms. south of the lode is another large lode, the very one that the mine was set to work on. I hope to get the shaft sunk to the 42 within two months; then it will not take long to see the lode in that level.

WARLEGGAN CONSOLS.—On Saturday we came to a stope of ground in the end, standing about 5 ft. high, with a good branch of tin on the north side, about 6 or 8 inches wide. We shall continue to clear away over this stope, and hope, by next week, to be able to send more particulars of the lode.—On the 1st inst. we had a good lode of tin in the adit end east.

WEST GOGINAN.—The north lode in the level, driving east from the shaft, is 4 ft. wide, with a mixture of killas, spar, jack, and spots of lead ore, The south lode in the level, driving east from the shaft, is 6 ft. wide, composed of killas, spar, prian, jack, with small branches of lead ore, and has a very promising appearance, not being more than 10 fms. from the surface.

WEST NANT-Y-MWYN.—The result of our visit is altogther satisfactory. We find two or three very promising lodes laid open, such as will, I am inclined to think, pay us well by-and-bye. The large lode is clearly one of the Great Nant-y-Mwyn lodes, a very strong lode, and presenting good features at surface, with some beautiful specimens of lead ore, which pleased our Truro friends very much, as did also those we brought from Bronfloyde.

WEST WHEAL JEWEL.—In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, lode unproductive. In Carkeek's winze, below this level, on the same lode, lode producing stones of ore. In the 57 fm. level, west of Hodges's cross-course, on Tolcarne tin lode, lode worth 7*l.* per fm.; the 57 fm. level, east of cross-course, on the same lode, is worth 4*l.* per fm. The 42 fm. level, west of Quarry shaft, on same lode, is producing stones of tin. In the shallow adit, west of Tregoning's shaft, on same lode, the lode is worth 8*l.* per fathom. The stopes in the back of the 12 fm. level, west of Pryor's winze, on same lode, are worth 14*l.* per fm.; the stopes in the bottom of the 12 fm. level, east of Tregoning's shaft, on the same lode, are worth 27*l.* per fm.; the stopes in the bottom of the above level, west of Tregoning's winze, on same lode, are worth 24*l.* per fm. These stopes are working on tribute.

WEST WHEAL VIRGIN.—We are sinking the engine-shaft under the 9 fm. level by nine men, and are down from 6 to 7 fms. under the level. There is a good lode of tin in the shaft, and holding east and west in each end. When the shaft is down 10 fms, and we begin to extend our levels east and west on the lode, we shall raise a good quantity of tin.

WHEAL ADAMS.—No alteration has taken place in the 72 fm. level end up to Friday, the 27th Dec., when we completed our dialling, and the men suspended driving on the eastern, and commenced cutting into the western part of the lode, where the ground is much harder than any we have before seen in the mine. The second hole blasted brought out splendid stones of lead, and let down a stream of water sufficient to keep the engine at work since the 28th ult. The water is now only 4 ft. above the level, and we expect it gradually to decrease until the 60 becomes drained. Although this may cause some delay for a few days, we fully believe that a large and productive lode will be laid open at this level. We think it advisable to resume driving on the eastern part, directly under the flookan, which part, or eastern lode, is nearly divided from the quartzose lode by a vein of flookan, not exceeding an inch in thickness. It is, however, much more favourable for driving, and when we extend the level about 2 fms. further south, we propose to take down the lode to the western wall. The water is decreasing in the 60. The stopes in the bottom have reached the poor ground, where the 60 was suspended poor, but in driving it a few feet further it again became productive, and, in all probability, the stopes will be found equally so. We have driven a cross-cut west in this level, to reach the elvan, thus proving that neither branch nor lode exists in this direction, west of the western silver-lead lode, on which we are opening, and find it producing tolerably good work. In the 50 north, the timbering has taken up more time than we anticipated, but we are doing every thing in our power to reach the end, for the purpose of driving north. The 40 fm. level north, cross-cut from the western silver-lead lode, has reached the jack lode, which is 2 ft. wide, in crushed ground, near old workings. The 40 and 28 fm. levels are being driven by the side of the lode in the good ground. There is no alteration in the cross-cut extending west from the old engine-shaft. The lode in the rise in the back of the 28 is 3ft. wide, consisting mostly of barytes, spotted with lead.

WHEAL AUGUSTA.—We are getting on well in this mine. The engine was put to work last week, and is working very well indeed; the water is in fork. We shall at once begin to sink the engine-shaft under the 18 fm. level, and also extend the 18 fm. level east and west on the lode. We have a good lode of tin in a winze under the 8 fm. level 10 fms. east of the engine-shaft. We shall not begin to work on our rich course of tin until our engine-shaft is a few fathoms under the 18 fm. level.

WHEAL CREBOR.—*Dec.* 28.—The lode in the 30, west of Gubbins's rise, is a good lode for copper; if it continues, it will turn out a great quantity of ore. The 40 is also improved, a strong gossan, with an orey lode nearly 2 ft. wide, well defined—it is as fine a gossan as I ever saw so deep.

— *Dec.* 31.—The following places have been set at the undermentioned prices:—The 12 fm. level to drive west on the south lode, by four men, at 6*l.* per fm.—stent 3 fms. The cross-cut to drive south in the 20 to Gill's, by one man and boy, at 3*l.* 3s. per fm.—stent the month, or cut a lode. A winze to clear up below the 30, at Gill's, by four men, at 10s. per fathom—stent 6 fms. The 30 west of Gubbins's rise by four men, at 2*l.* 15s.—stent the month. The lode in the end has very much improved since my last. A winze to sink below the 40 fm. level, west of Rundle's, to ventilate the 40 and 54 ends, at 5*l.* 5s. per fm.—stent the month, by four men; the lode in the 40 end is improved since my last, being about 2 ft. wide, composed of a fine gossan, copper, and mundic; this end is stopped at present, while the winze is sinking for want of air. The pitch in the back of the 40 by two men, for one or two months, at 9s. in 1*l.* I have let the 54 end to drive by two men, stented 6 ft., at 6*l.* per fm., on the condition that the end is to be stopped as soon as it is ascertained whether it is the same lode as the winze is now sinking on in the 40, then to rise to communicate the same. Engine, pitwork, &c., in good working order.

WHEAL EMILY.—*Dec.* 18.—We have now got through the hard ground in the shaft into killas ground, which will enable us to make more progress in sinking. I have put men on again in the backs, to desue and break more of the lode, having nearly completed dressing the pile lately raised. I am also about putting men on to raise the gossan on the lode, of which there are large quantities; from the samples tried, its produce is from 30 to 50 ozs. silver to the ton, and the expense attending dressing will be easy, compared to the costs in dressing the present mineral. I have had a pile (about 4 tons) of gossan lode which I found dressed on the floors; it produces 30 ozs. to the ton for silver. I am unable to extend the cross-cut at the bottom of the shaft (21 fms.) to prove what the lode is at that place, till the pare in the shaft are more out of the way, but trust very soon to be able to have the pleasure to communicate an improvement when we get at the lode in depth.

Dec. 25.—The lode in the 12 fm. level back is changing to gossan; we are now within 6 fms. of surface. I will endeavour shortly to get the main north and south lode cut at the 21 fm. depth—that is, in a cross-cut from the shaft that depth. I am of opinion that in depth (even at the 21 fms.) the value of the lode will improve. The assays we have had from this branch, of full a foot big in the cross-cut, and carrying its course towards our main north and south lode, proves it. I have selected some sparingly speckled with ore, and had it roughly bucked down, and, without further dressing, it will produce from 25 to 30 ozs. of silver to the ton. The shaftmen have sunk about 14 ft.

WHEAL FRANCO.—The lode in the 62 fm. level, east of the engine-shaft, is large and promising, and producing good stones of ore, and the lode is considerably better than in the 47 fm. level. In the 32 fm. level, east of Spry's shaft, the lode has been hove by a cross-course, and we have just met with the point of it on the eastern side, but as yet we are not able to judge of it in this place, as it is not clear of the influence of the cross-course. This cross-course has also hove the lode in the 10 fm. level above, and we have not as yet met with it in the eastern side. The engine-shaft is sunk nearly 11 fms. under the 62 fm. level, and the ground is still favourable for sinking. We intend shortly to commence the cross-cut, to intersect the lode in the 72 fm. level. At the deep lobby the ground is rather more favourable for driving. The pitches are much the same as they have been for some months past.

WHEAL GUSKIS.—We have got at the adit end, about 3 fms. west of the shaft, in old Tom Rapson's garden, and I have just been down seeing it; we have a kindly lode containing copper greens and gossan, and the lode worked through for tin farther to the east. I am now going to put the men to make some trial of the lode by opening on it, and think it will show a good appearance for copper at least. In this western part it seems to show very favourable appearances for copper, and shall be able to let you know much more about it in a few days. I think the shaft you dialled for near the junction of the lodes will be a suitable shaft to cut down for our machine. Will you think of this, and let me know your opinion of it?

WHEAL HAMLYN.—We are still driving on the caunter lode, which is looking much the same as last week.

WHEAL HARRIS.—The lode in the 25 fm. level west is much improved for lead; it is better than I have ever seen it; the part that we are driving on is about 1 ft. wide—6 in. of which for 3 ft. high in the end is, I am happy to say, good saving work; therefore, I have a strong opinion that, in driving a few fathoms more—say, from 4 to 5 fms.—there is every probability of meeting with a deposit of ore at the intersection.

WHEAL LANGFORD.—Since my last to you of the 16th, we have driven on the new or south lode about 2 fms. west, the lode is of a promising character; we intend driving east this month on some good saving work for silver. In the north adit level we have been driving by the side of the lode, and have now about four days' work to get away the attle, and then we shall be able to take down the lode, where we expect it is rich for silver; the stopes in the back of this level are still producing saving work, varying in quality from 160 ozs. to about 50 ozs. to the ton. We have at present about 10 cwts. of silver ore dressed, producing 159 ozs. to the ton, and about 15 cwts. producing 50 ozs. to the ton, and about 8 cwts. not dressed, I should think about 70 to 80 ozs. to the ton. We have done but little to our copper lode since my last. At Wheal Baring (on Callington Common), since my last, we have driven about 7 fms., but not cut the lode as yet. I have forwarded you the cheque for the last parcel of silver, 58*l.* 16s. 1d.

WHEAL LANGMAID.—The water-wheel was put to work on Saturday, the 28th, and is forking the water very fast; it will be in fork in a few days, and every preparation will be made for sinking this shaft to the 25 fathom level, where there is no doubt of having a good course of lead, as the prospects are so far encouraging in the 15 fm. level; and I believe, from the quality of the work drawn from the 15 fm. level, Wheal Langmaid will make a first-rate mine.

WHEAL PROVIDENCE.—The lode is much improved since last report—it is composed of prian, gossan, and mundic, interspersed with lead. The walls of the engine-shaft are now up 20 feet.

WHEAL SARAH.—The east and west lode is looking better, and getting larger; the south part is softer, with more ore. I think the north part, when we take it down, will turn out a good pile of grey ore.

WHEAL TREMAYNE.—At Madron's shaft, on the south lode, in the 70 fm. level west, the lode is 3 ft. wide, worth 6*l.* per fm. In the 60 fm. level, west of Thomas's shaft, on the same lode, the lode is 1 ft. wide, unproductive; in the winze sinking under the 60 fm. level, east of ditto, the lode is 3 ft. wide, worth 8*l.* per fathom. Shugg's shaft, on Wheal Bonnett lode, is suspended for the present, in consequence of surface water; the men are engaged sinking a winze under the 40 fathom level, east of shaft; the lode is 5 in. wide, worth 3*l.* per fathom. In the cross-cut driving north of the engine-shaft, east of Williams's shaft, we have intersected a small branch, producing good stones of tin. We expect to intersect the lode shortly in the 30 fm. level, west of Laurie's shaft, on the north lode, the lode in which is disordered and poor. At middle whim-shaft, on the north lode, in the cross-cut driving north in the adit level of the same shaft, we have not intersected the lode yet. At Champion's shaft, on the same lode, in the 10 fm. level driving east, the lode is large and unproductive. In the winze sinking under the adit level, east of the same shaft, the lode is 2 ft. wide, opening tribute ground. At Painter's flat-rod shaft, on the south lode, in the 50 fathom level west, the lode is 2 ft. wide, composed of flookan mixed with killas, capel, and some spots of ore; ditto east, the lode is 15 in. wide, chiefly composed of capel, unproductive. In the winze sinking under the 40 fm. level, east of shaft, the lode is 1 ft. wide, opening tribute ground; in the winze sinking under the 40 fm. level, west of ditto, the lode is 10 in. wide, composed of flookan, unproductive. In the 40 fm. level west the lode is 2 ft. wide, worth 4*l.* per fm. In west whim-shaft, sinking under the 30 fm. level, on the same lode, the lode is 1 ft. wide, composed chiefly of spar, with some spots of ore, not to any value. In the 30 fm. level, driving west of ditto, the lode is disordered and poor; in the winze sinking under the same level the lode is 14 in. wide, opening tribute ground. The boundary engine-shaft men have commenced sinking under the 63 fm. level for bearers and cistern, to fix drawing lift in that level—the branch is now worth in the bottom of said shaft 40*l.* per fm. In the 63 fm. level, driving east of ditto, on the engine lode, the lode is 10 in. wide, worth 3*l.* per fm. In the winze sinking under the 53 fm. level, east of ditto, on the engine lode, the lode is 10 in. wide, worth 12*l.* per fm. In the 53 fm. level driving east on the engine lode, the lode is 1 ft. wide, worth 5*l.* per fm. In the winze sinking under the 53 fm. level, west of Allan's shaft, on Allan's branch, the branch is worth 15*l.* per fm. In the 45 fm. level, driving east of boundary engine-shaft, on the engine lode, the lode is 14 in. wide, worth 4*l.* per fathom. Our tribute department is looking much the same as it has for some time past.

WHEAL VINCENT.—The lode in the west end is much improved, and is now about 4 ft. wide—very good for tin—so that we can keep our stamps constantly at work. The smalls of this lode we are dressing without the stamps. We are leaving a good lode in the back, and also in the bottom, as we go on. The ground in our new shaft is easier than it was last week, which will enable us to sink as much now in one week as we could before in two.

FOREIGN MINES.

ALTEN MINING ASSOCIATION:—

Mining Report from the 1st to the 23d of November.

Raipas.—In the stopes west of Mark's shaft, the ore in the lode has somewhat improved, though I am sorry to say that the ground continues equally hard as when last reported. In the winze below the 20, the ground is at present very much confined, so much so as to check our progress considerably in this bargain. In the level driving east there is no alteration. In No. 4, owing to the unsettled state of the country, the ore has become, during the past week, very much disordered; and it is not unlikely we shall shortly be compelled to search for this bed of ore in some other part of the mine, where the ground is in a more settled condition; but as this is mere conjecture, it remains yet to be decided whether such a movement will be found necessary. In the shallow adit workings the lode has considerably improved, but as the nature of the lode is here so fluctuating, as well as in other parts of the mine, it is impossible to assert how long the present favourable appearance may continue. There is nothing worthy of remark in the other portions of the mine. In taking a view of the whole of our workings at Raipas, they cannot be looked upon otherwise than in a favourable light, although perhaps not in such a degree as I could wish. Still, I calculate, despite the encroachment of the dark days, which causes a great impediment to our proceedings at the surface, that we may be able to realise 7 tons of fine copper for the month of November.

United Mines.—No change is to be observed on Ward's lode since my last report; some good pitches of ore are occasionally found, but the ground being hard, the men make slow progress. At Woodfall's the tributers have resumed operations on a small branch above the adit level; the ore is of good quality, and the prospects somewhat more promising.

Old Mine.—For some time past our tribute operations at this mine have yielded profitable returns, and the prospects being equally favourable led us to hold out a promise of a long continuance, The extended scale of workings lately formed at this mine having answered our expectations, and being encouraged by the good returns, we are induced to employ a greater number of hands next month. We propose, therefore, to resume not only the old workings to the eastward of the middle sink, but also those above the Bergmester's, and where the prospects have considerably improved. Siungi's sink continues to yield good and profitable returns, with a prospect of permanency. The lode in the north east sink still holds good, and the tributers are making remunerative returns. In the adit level we are making fair progress; but the country has recently become somewhat harder for excavation,

Ryper's.—The workings at this mine have again become somewhat deteriorated. The quality of the produce, though small, is very good, and the prospects are encouraging.

Mancur's.—The tributers continue to produce a small quantity of rich ore, but no improvement has taken place.

Michell's.—The produce of this mine has latterly been subject to many fluctuations, principally arising from a falling off in the returns from Nellen's lode above the adit level, and which lode is now nearly exhausted; a slight improvement, however, is again visible in the back of the lode near the surface, while some good gossan ore is being raised. In the adit level driving under the precipice we have no improvement to note; the men are making favourable progress, and we hope to intersect the lode shortly.

IMPERIAL BRAZILIAN MINING ASSOCIATION:—

Bananal, Oct. 23.—We determined on making a new milliar at Gongo, and for which purpose we have taken one of the old milliars that formerly was worked in the Eliza wheel; this will save us some considerable time in fagoting the iron. I am expecting this new milliar here to-day, when it will be immediately put into the lathe, and before I have the pleasure of addressing you again, I hope it will be finished, and the wheel set to work. With regard to our proceedings in this mine I have very little to inform you of. I have, however, to notice that we have obtained a little work for the washing-house, but it was poor, having only produced 4 ozs. We have holed the adit level north of Goldsmid's shaft to the cross-cut west of Vray's. Our next proceeding here will be to select the most promising vein intersected in this cross-cut, and commence driving on it towards the old workings, called Morro das Almas. The produce from Gongo is again very little, owing, in some measure, to the want of surface water, but principally to the poverty of the jacotinga. We are, however, hoping for better results, when we get more into the heart of the old workings. *Gold Report.*

Produce from Gongo—from 13th to 23d Oct.	*Lbs.*	1	8	1	0			
„ Bananal—from 13th to 23d. Oct...		4	9	15	0	6	5	16 0
Total from July to 13th Oct.—Gongo		39	5	14	0			
„ „ „ Bananal.....		76	10	15	0	116	5	14 0

133 lbs. 2 ozs. 10 dwts. of gold dust has arrived at Falmouth, value about 5200*l.*

NATIONAL BRAZILIAN MINING ASSOCIATION:—

Cocaes, Oct. 22.—We have great pleasure in waiting upon you with a report on the proceedings in the mine since the 12th inst., not only on account of the little improvement in the produce during the last 10 days, but the probability of finding some rich deposits of gold in the layer last discovered, gives a new life to the works. On the date of the last report, we could not ascertain whether this line continued upwards parallel to the southern floors or not; but from measurements lately taken, it seems to incline a little more towards the west than those in Hartley's, Hamilton's, and the F slopes. This, however, may be owing to some unobserved flexure in the lode, which may affect the magnetic bearing of the vein for a short distance only; and we hope it is the case, for the samples and specimens which we have seen taken from here are indeed very encouraging; and, judging from its present direction, it will continue to very nearly the height of the shallow adit, without coming in contact with any other layers, or terminating in any old excavations. At this place (which in future will be called Hamilton's new stope) there has been a floor of jacotinga discovered, but which (contrary to what has been observed on previous occasions) has not diminished the more productive and compact layers below.

Cuiaba, Oct. 26.—I hope that you will acknowledge that this mine is now laid open in a mining-like manner, as character to me is everything. Furthermore, I have had no assistance in the mine from any agent, neither have I stuck my opinion to on another person's sleeve. But I have much pleasure in announcing to you, that since the communication has been made from Hartley's level to Le Page's stopes, it will afford us a speedy supply of stone obtained therefrom, and also productive for some time to come. But when we get a few fms. further on with Hitchen' level, we can put a rise up through this new unexplored ground to hole to the stopes above; and then we shall be able to hole with much greater facility at the point in question, that will give you more tons of stone per day than you have been doing for many years past. The following is a detailed statement of operations at Hitchens' level since last general post; the purport of which I hope will be to your satisfaction, more especially so as our prospects are improved, and will now exceed the previous expectations I have held out to you. Now, respecting the lode in this level, which was said to be cut out by a slide, and indeed where many foolish explorations had been made in search of it; I say this with no ill-will to any one, but I certainly have the greatest dislike to every shape of evasion. Since we holed Hartley's level, I have had a little more time to look around, and have taken some pains to find out the above error that was made by my predecessors; and after having had 24 years' experience in England and in this country as a miner and mine agent, I ought to know mining by this time. I don't mean to say but what they might term it a slide; but I do mean to say that the lode is not hove by this slide out of its regular run; neither is this slide anything more than the lode is subject to, as it is intersected by beds of killas in other places. Again, I have known similar occurrences in many mines, and mines that have proved most productive, and have realised their thousands to the adventurers. If we were to look at our neighbouring mine of Morro Velho, such have been met with there years gone by; so it goes to prove it is a law in nature, and indicates a richer lode in depth. For instance, you very well know that this lode is winding round the mountain in the shape of an egg, if you will allow such an expression for mining; now, at our present stopes, or working, the lode is running nearly east and west, but at Hitchens' level it is winding round in a southerly direction, as you see at the surface. Therefore, they could not have calculated on such turn, because they continued their levels west and north, rose and sunk; so it was only going further from it, or beating around the bush, and taking a leap in the dark.

Cocaes produce, from 14th to 23d Oct.....	*Mks.*	7	4	5 52
Cuiaba ditto, from 17th to 26th ditto.....		3	1	1 24
Total.....		10	5	7 4

LINARES MINES.—The following has been received from Mr. H. Thomas:

Linares, Dec. 21.—In the bottom level (55), driving west from San Anton winze, the lode has much improved, having now a leader of lead ore worth 2 tons to a fm.; east of this winze the produce is still irregular, though the lode contains good lumps of lead. In the 45 fm. level, driving east, the lode is without alteration. In the 31 fm. level, driving east, the lode is very large, and the leader part producing from 1 to 1½ ton in a fm., and opening good tribute ground, especially in the bottom of the level, where the lode is better than in the back. Shaw's shaft is sunk under the 45, the produce of the lode being as last reported—viz., 2 tons in a fm. Williams's shaft is down 2 fms. 1 ft. under the 45, and is still sinking on a productive lode, though not quite so good as when I last reported to you. We have cleared San Jose winze, which is not communicated to the 45; the ground east of this winze (between the 31 and 45) is mostly worked away, but west there is a good lode still standing, worth between 2 and 3 tons in a fm., the lode in the bottom of the winze being also of a very favourable character, and worth about 1 ton to a fm. We hope ere long to communicate this winze, and to drive the 45 west, by which we expect to open some good tribute ground. The pitches are all going on well, and we are preparing our dressing-floors for the increased quantity now breaking.

Ore in stock at Linares, Dec. 14, 152 tons 5 cwts.; weighed in, Dec. 21, 26 tons 4 cwts.—sent for shipment, 9 cwts. =178 tons; at Baylen, 14 tons 14 cwts.; at Seville, 66 tons 7 cwts.; at Malaga, 59 tons; on board ship, 126 tons 10 cwts.: total, 444 tons 11 cwts.

ST. JOHN DEL REY MINING COMPANY:—

Morro Velho, Oct. 8.—Produce for Sept., 21,196 oitavas = 203·63 lbs. troy; 21,159 oits. from 5223 tons of ore, yielding 4·005 oits. per ton, with 37 oits. scraped from the sides of the furnace, belonging by right to the produce of August = 21,196 oits. The stamps working during the month averaged 94·55 heads. The supply of stone has been abundant, enabling us, during the month, to add nearly 400 tons to the refuse heap; and I am happy to add that a perceptible improvement has been reported to me by the mining captains, as well in the West Cachoeira (which had for a short time become much deteriorated) as in the East Cachoeira; though, on the other hand, in the East Quebra Panella, the killas is now seriously encroaching on the lode.

Cost for September, Rs. 41,355½, at 27d.		£4652 9 11
Produce....	21,196 oits.	
Less duty 5 per cent. ...	1,060	
Net oitavas	20,136, at 7s. 7d.	7634 18 0
Profit		£2982 8 1

The Bahu Mine is just now not in as good working order as it usually has been, owing partly to the interruptions caused by laying down Hurry's inclined plane, and partly by sinking in the sump being for the present stopped, while operations are in progress to turn the shaft towards the south, in which direction it appears that the richest part of the Bahu lode has betaken itself, compelling us, though after no slight hesitation, to follow it with our sump and pitwork.

Oct. 18.—Gold extracted to date, 6980 oits., from 387·85 cubic feet of sand, the result of 10 days' stamping, yielding from 17·99 oits. per cubic foot. Stamps working 17 days, average heads 93·3. The supply of stone is abundant, but large quantities of killas are now coming up from the Bahu, as in my letter of the 18th Sept. I prepared you to expect would be the case whenever the Hurry inclined plane went to work. This latter went to work on the 12th, and though at first the deficiency of water caused an unexpected slowness in the movement of the carriages, as well on the Hurry as on the Catherine inclined planes, both are now moving on in a very satisfactory manner. The people are now actively engaged in extending the line to the fourth station; meanwhile this new inclined plane is a beautiful structure, and does credit to its ingenious contriver, Captain Goyen, being safer and more economical than his other constructions of this description; and the carriage is so contrived, that I cannot see how any accident can ever detach it from the inclined plane.

Oct. 28.—Gold extracted to date, 13,308 oits. from 767·57 cubic feet of sand, the result of 20 days' stamping, yielding 17·26 oits. per cubic feet. Stamps working 27 days, average 93·47 heads. The supply of stone has been ample, but the quality of that coming from the Bahu Mine is, I regret to say, very inferior, arising partly from the large quantities of killas removed in opening out the north branch, and partly from the absence of our usual supply of rich ore from the bunch, caused by the suspension of sinking, while engaged in the operation of giving a southerly turn to the sump. In about a month I hope this latter cause will cease to affect us.

CARADON VALE MINING COMPANY.

The two-monthly general meeting of shareholders was held at Exeter, on the 23d Dec. J. S. Higgs, Esq., in the chair.

The statement of accounts showed a balance of 52*l.* 15s. 1d. against the adventurers, and a call of 7s. 6d. per share was made. The purser states that a detailed report of the mine will be published in the course of a month. The shaft is now down 10 fms. below the 14 fm. level, and it is intended to cut the lode at 10 fms. below the present depth, which will take two months—the ground is easy.—[We have since learned that a very considerable improvement has taken place.]

EAST CROWNDALE MINING COMPANY.

The annual meeting of shareholders was held on Tuesday, the 31st of Dec. G. B. Carr, Esq., in the chair.

The notice conveniag the meeting having been read, and the minutes of the last annual meeting confirmed, a report was submitted, of which the following is an abstract:—

At this meeting the committee have to present a statement of accounts for the year ending 30th Nov. last, with a short report on the past operations and present prospects of the adventure. The workings during the last twelve months have been confined on tut-work, to sinking the middle shaft to the 50 fm. level, extending the 28 and 40 fm. levels east and west thereof, and stoping backs (chiefly of the upper or 17 fm. level) on tribute. The returns have not as yet been to any considerable amount, but it affords the committee pleasure to state, that whilst they have been sufficient to meet the current expenditure, a large extent of ground has been laid open, which hereafter it is expected will be stoped away advantageously. It is, however, necessary to observe, that the lode in the 20 fm. level, though at times very promising and productive has fluctuated greatly, and caused some disappointment. The 40 fm. level has been driven east about 30 fathoms through fair tribute ground, and the character of the lode at this point has considerably improved, insomuch that the mining agents speak more confidently as to the 50 fathom level, where they anticipate having a good course of ore; this a few months will decide, and should the expectations of the agents be realised, the adventurers may expect profitable results before long, the plans for making the tin marketable being now so complete and well-arranged, that no extra expense will be incurred, as hitherto has been the case. The agent's report will be found in the usual summary of the mining intelligence.

The financial statement showed the balance brought down from the last account to be 101*l.* 10s. 2d.; tin sales, 3324*l.* 19s. 9d.=3426*l.* 9s. 11d.—Expenditure, 3343*l.* 1s. 2d.—leaving balance in favour of adventurers, 83*l.* 8s. 9d.

The committee expect during the next year the mine will become profitable to the shareholders, inasmuch as the lode has been opened on to some extent, and fair tribute ground discovered; whilst the arrangements for making the tin marketable with the least possible cost are complete, and they hope that at the next meeting the adventurers will not be disappointed.

The report and accounts were then passed unanimously, and after a vote of thanks to the chairman and committee, for their judicious and economical management during the past year, the meeting separated.

EAST WHEAL REETH MINING COMPANY.

A special general meeting of adventurers was held at the offices, White Hart-court, Lombard-street, on the 2d inst.

John E. Dunt, Esq., in the chair.

The notice convening the meeting having been read, the accounts were submitted, from which it appeared that a considerable sum was due on the last call. The following rule was adopted, in addition to the rules and regulations passed for the management of the company, at a general meeting held on the 15th November:—

"That if any shareholder or shareholders neglect or refuse to pay the calls made on him or them respectively, at any general or special meeting, duly convened for that purpose, and within the time specified in the notice of such call, and if such calls shall remain unpaid 21 days after the time specified in such notice, the committee shall have full power to declare forfeited, for the general benefit of the company, the said shares of such shareholder or shareholders, and all right and interest of the said shareholder or shareholders therein."

The present state of the mine having been explained by Mr. Gray (the engineer), and the desirability of steam-power being made evident, in order to work the mine vigorously and develope its resources, which are stated to be

rich and abundant, it was resolved, that operations at the mine be discontinued, except at the adit, with a view to the erection of steam-power; and Mr. Gray was requested to make inquiries for a second-hand steam-engine of sufficient power, and report the result to the committee, with the probable cost, and time required for its erection. To meet the expense of these arrangements, and to clear off all liabilities on the mine to the present time, a further capital was required, and a call of 5s. per share was made.

GEORGE AND CHARLOTTE MINING COMPANY.

A general meeting of shareholders was held at the mining office, Tavistock on Friday, the 27th of December.

JOHN BAYLEY, Esq., in the chair.

The statement of accounts, for the four months ending November, showed a balance of 5*l.* 18s. 7d. in favour of the adventurers; but, for the more effectual development of the mine, a call of 2s. 6d. per share was made, and the shares were increased to 1024.

The following report, from Capt. A. Barratt, was read to the meeting:—

Since the last meeting of adventurers the shallow adit level has been driven south on the cross-course about 8½ fms., and beautiful specimens of malleable copper, with black and yellow copper ores have been occasionally broken from it for the greater part of this drivage. It appears from our dialling that there are still from 4 to 5 fathoms to drive to intersect the lode we have in view, as may be seen on referring to the plan. An end has also been driven east in this level on the lode referred to in my last report; the first 3 fms. were driven on its course through a lode producing 2 tons of rich ore per fathom, when it was cut off by a cross-course, which shifted it to the north (by what is commonly called a right hand heave) about 3 fms., where it was again met with, but not of the same encouraging appearance as before, it being disturbed by the cross-course. We have since driven east on its course 3 or 4 fms., and I am glad to say the end has now a promising appearance, and the lode has become more defined, producing good stones of ore; two men are at present stoping the back of this level between the two cross-courses, the lode there has a good appearance, and is yielding 2 tons of rich ore per fm. A rise has been put up from the deep adit level against a cross-course, where it was thought a bunch of ore might be found, but the lode not turning out as well as was expected, it was deemed desirable to suspend the rise for the present. The men have been since employed in drawing out the water, and clearing the stuff from the sump-winze below this level, and we have met with a kindly lode about 7 fms. down, where they are driving east and west on its course, the lode producing nearly 1 ton of ore per fm. Probably this will eventually lead to something of importance, there being no level driven under it.

PENTIRE GLAZE AND PENTIRE UNITED SILVER-LEAD MINING COMPANY.

A general meeting of shareholders was held at the George and Vulture Tavern, Cornhill, on Saturday last, the 28th Dec.

The Rev. G. R. HARDING in the chair.

Mr. B. RANKIN having read the notice convening the meeting, reports from Mr. Rowlandson, C.E., F.G.S., and Capt. Dunstan, of West Caradon, were read, which were highly satisfactory.

Mr. ROWLANDSON was present, and fully explained the present appearances of the mine. It appears that the mines are situate in the killas, and have been upheaved by eruptive masses of greenstone. The lode, a very large one, is conformable with the dip of the adjoining greenstone, and lays within a few feet of it; the opinion expressed is, that the contents of the lode at the time of upheaval were heated to the point of fusion, in which state the ore was projected into its present position, filling up any irregular cavities in the slate, which would be naturally caused by the volcanic disturbance there going forward. The position and appearance of the excavations, where the 2000 tons of ore were extracted, is said fully to corroborate these inferences Mr. Rowlandson arrives at the conclusion that the most profitable course for the present adventurers to pursue, is to clear away the backs and other orey ground at present in sight, in the most rapid manner, consistent with economy, and to drive northward in the 22 fm. level, as proposed in the joint report by himself and Capt. Dunstan. In this report they say:—

Dec. 21.—We find two parallel lodes, 8 fms. apart, now being worked. The first, or old and main lode, from which such a great amount of ore was extracted by former parties, has been worked to 22 fms. below the adit, in which the workmen are now driving north; the lode is large, composed of flookan, quartz, mundic, with copper and lead; the backs of this lode are now stoping for lead, and yielding 15 tons of the latter per month. Second, the new or middle lode, which was discovered by driving the cross-cut west, has been operated on to the extent of 30 fms., 28 fms. of which is productive ground, yielding 1½ to 2 tons of ore per fathom, with appearances of a generally encouraging nature. This lode stands whole to surface, with the exception of what has been stoped in the back of 10 fm. level, and there is every probability of large quantities of lead being found above the present back, which is now 38 fms. to surface. The 10 fm level has been driven northward to the slide, and it would not be prudent to drive further in that level, for fear of the sea breaking in; but in the 22 fm. level we consider this may be done with safety, which level is now driving northward from the engine shaft, in order to arrive at the ore ground gone down to the bottom of the 10 fm. level, which we anticipate will be reached in about four months from the present time, it being 38 fathoms distant, in the course of which there is a far probability of meeting other ore ground. Judging from the general appearance of this mine, and carefully weighing all the circumstances connected with it, we are unanimously of opinion, that by driving northward, and at lower levels, there is the greatest probability that a very large amount of lead will be raised, and very considerable profits realised. This opinion has not been arrived at by simply taking into consideration the appearances of the lodes as presented in the mine; but from a careful examination of a variety of accompanying geological facts, some of which are strongly marked on the face of the cliff, where there is to be seen a very fine section, and at whose base there are a number of water-worn boulders, containing lead and copper ore similar to those found in the ore ground. The machinery and plant at the mine are sufficiently powerful for the present prospective operations. There are about 30 tons of ore now ready for the market.

It was resolved that the recommendation be carried into effect, and that the committee be requested to act in accordance therewith—to have more tut-work and less day-work than heretofore on the mine.

PRAED CONSOLS MINING COMPANY.

A meeting of adventurers was held at the offices, White Hart-court, Lombard-street, on the 2d inst., to make arrangements for conducting the business of the mine in London, when it was resolved that the offices should be in White Hart-court, Lombard-street, that Mr. Fenton should be the secretary, and James Gray, Esq., C.E., the purser and manager at the mine. It was also resolved that the shares should be increased from 512 to 1024, the additional number to be divided among the shareholders, in proportion to their present holdings.

Mr. GRAY explained that the Praed Consols sett is situated in the parish of Towednack, in Cornwall, and is surrounded by the following celebrated tin mines:—St. Ives Consols, Rosewall Hill, Reeth Consols, Wheal Reath, Balnoon, &c. The sett contains four or five east and west lodes, and one large lode, 12 ft. wide, running north and south, and intersecting the east and west lodes. This lode is very rich, and, although worked only to the depth of 8 fms., has yielded considerable quantities of tin, and has every appearance of continuing very productive, especially where the east and west lodes intersect it. Here is supposed to be a continuation of the Carbona in Rosewall Hill, which has yielded such immense quantities of tin. The adit level has been driven on one of the east and west lodes through 20 fms. of good lode, which was worth about 50s. per bushel. There is a cross-cut driven from this adit to another lode, and continued on its course for more than 100 fms. A quantity of ore is now at surface, and there is every prospect of its being a dividend-paying mine in a comparatively short period.

The report and explanation of Mr. J. Gray were deemed satisfactory, and a committee was appointed to take steps to carry his recommendations into immediate operation.

WHEAL RUSSELL MINING COMPANY.

A general meeting of shareholders was held at the mining offices, Tavistock, on Friday, the 27th December.

JOHN RUNDLE, Esq., in the chair.

It appearing that 16 shares in West Russell, and 48 shares in East Wheal Russell, were unappropriated, it was resolved that the same should be vested in the purser on behalf of the company. The statement of accounts for Aug., Sept., Oct., and Nov., showed a balance of 365*l.* 12s. 2d. against the adventurers. It was further resolved, that as West and East Russell were divided into 4000 shares, it should be left to the consideration and decision of the next meeting whether the shares should not be increased from 1024 to 4000 also.

The following report, from Capt. A. Barratt, was read to the meeting:—

The sinking of the engine-shaft is completed to the 48 fm. level, and we have set the cross-cut to drive south to the great lode, at 6*l.* 10s. per fathom, and which we expect to meet with in about 5 or 6 fathoms, an object we look to with some degree of interest, as the south lode, producing the whole of the ores now being raised from the mine, will evidently drop into it somewhere between the 38 and 48 fm. levels. The lode in the 37 fm. level east is still looking well, being 2½ ft. wide, producing 3 tons of good ore per fathom. In the winze sinking below the 37 fathom level the lode is 2 ft. wide, yielding 1¼ ton of ore per fathom; a small cross-course has lately intersected the lode, which somewhat disordered it, but it is again resuming its former appearance. In the 37 fm. level north, to the west of the engine-shaft, the cross-course is divided into two parts since we have met with the great lode, and in the midst of which a piece of lode is now showing itself, producing good stones of ore. The lode in the 26 fm. level, west from the engine-shaft is not looking quite so well as when last reported on, it not being so large. A small branch has been met with in the cross-cut in the 16 fm. level, but not of much importance. The pitch in the back of the 37 fm. level is still looking well, turning out 3 tons of ore per fm. No alteration of importance has taken place in the pitches above the 26 fm. level since my last report. We sampled on the 23d inst., 42 tons 5 cwts. of ore. I beg to recommend to the consideration of the meeting the propriety of cosseaning in the eastern part of the sett.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars ....per oz.	£3 17 9	New dollars.....per oz.	£0 4 11¼
„ Portugal pieces....	0 0 0	Silver in bars (standard)	0 5 1¼

A metal bridge now in course of erection at the Chetwynd viaduct, on the Cork and Bandon Railway, will, when completed, be within 10 feet of the height of the Britannia Tubular Bridge, which now crosses the Menai Straits. The ingenious and extensive works at this viaduct are a source of great attraction, and are daily visited by large numbers of the scientific and curious of that part of the country.

LATEST CURRENT PRICES OF METALS.

LONDON, JANUARY 3, 1851.

ENGLISH IRON. *a*	*per ton.*		
Bar, bolt, & square, London ..	£5 7 6–5 10		
Nail rods	6 0–6 10		
Hoops	7 0–7 10		
Sheets (singles)	7 12 6–8 5		
Bars, at Cardiff & Newport ..	4 15–5 0		
Refined metal, Wales*	3 5 0–3 15		
Do. anthracite*	3 10 0		
Pigs in Wales	3 0 0–3 5		
Do. do. forge	2 5 0–2 10		
Do., No. 1, Clyde ...*net cash*	2 4 6–2 6		
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 10 0		
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0		
Stirling's Patent } in Glasgow	2 15 0		
Toughened Pigs } in Wales	3 10–3 15		
Staffordshire bars, at the works	5 7 6–6 0		
Rails	5 0 0–5 5		
Chairs (Clyde)	4 0 0		
FOREIGN IRON. *b*			
Swedish	11 10–12 0		
CCND	17 10 0		
PSI	—		
Gourieff	—		
Archangel	—		
FOREIGN STEEL. *c*			
Swedish keg	14 15–15 0		
Ditto faggot	15 0–15 5		
ENGLISH COPPER. *d*			
Sheets, sheathing, & bolts, *p. lb.*	0 0 9¾		
Tough cake *per ton*	84 0 0		
Tile	£83 0 0		
Old copper *e* *per lb.*	8¼*d*		
Yellow Metal Sheathing	8*d*		
FOREIGN COPPER. *f*			
South American, in bond	77 0–87 0		
ENGLISH LEAD. *g*			
Pig *per ton*	17 10–17 15		
Sheet	18 10–18 15		
Pipe	19 0 0		
Red lead	19 0 0		
White ditto	25 0 0		
Patent shot	21 0 0		
FOREIGN LEAD. *h*			
Spanish, in bond	16 0–17 0		
ENGLISH TIN. *i*			
Block *per cwt.*	4 3 0		
Bar	4 4 0		
Refined	4 9 0		
FOREIGN TIN *k*			
Banca, H. C.	4 3–4 4		
Ditto, for Export only	—		
Straits	4 2–4 3		
TIN-PLATES. *l*			
IC Coke *per box*	1 7 6–1 8		
IC Charcoal	1 12 6–1 13		
IX ditto	1 18 6		
SPELTER. *m*			
Plates, warehoused *per ton*	16 7 6–16 10		
Ditto, to arrive	16 7 6		
ZINC. *n*			
English sheet *per ton*	21 0–21–10		
QUICKSILVER *o* *per lb.*	3*s.* 9*d.*		

WELSH BARS continue in good demand, and rather better prices have been paid. The market closes at 4*l.* 15s. buyers, with sellers at 4*l.* 17s. 6d. and 5*l.*

SCOTCH PIGS.—There still continues much confidence in this article, and although transactions have not been so exfensive this week as last, holders have been very firm, and nothing is to be had under the following rates:—Mixed Nos., cash against warrants, 45s.; against B.f.S., 44s. 6s. No. 1 Gartsherrie, 46s. to 46s. 6d. The present stock of iron in Glasgow is estimated at 275,000 tons, of which about 105,000 tons are in store-keepers hands. The number of furnaces in blast is 105.

LEAD.—A good business is doing, and the market is very firm.

TIN has again been sought after, and several transactions have taken place at rather better prices. There are now few sellers, except at an advance on present quotations, and the market wears an upward tendency.

ENGLISH TIN.—Smelters are not willing sellers, and many look for a rise in the price.

TIN PLATES.—For all IC. coke higher prices are asked; assorted lots are offering at the quotations.

COPPER is steady, and a firm business passing.

SPELTER is unenquired for, and nominally at 16*l.* 10s.

GLASGOW, JAN. 2.—Our market for pig-iron continues very firm; but rather less business has been done, partly owing to the holidays, and partly owing to the great discrepancy in the statements respecting the stocks in Scotland, which are variously estimated from 220,000 to 270,000 tons, which, we think, arises in some measure in not allowing a sufficient reduction in the stocks in some of the makers' hands for the quantity which has lately been put into stores, as it is manifestly impossible that the stocks can reach anything like the larger amount, considering the number of furnaces which have been standing during the year, unless the stocks at the commencement of 1850 were very much understated. Mixed Nos., good brands, free on board here, 45s. 3d. per ton, net cash, for transactions. No. 1 Gartsherrie, 46s.; No. 1 Forth, 47s. 6d.; No. 1 Kirkintilloch, 46s. 6d.; bars, &c., firm at last quotations.—[We will forward you our annual statement next week; we have delayed it, as we wish to obtain the very last information.]

Current Prices of Stocks, Shares, & Metals.

MINES.—There is a perceptible difference in the amount of business transacted this week, attributable probably, if not wholly, to the season of the year, and a rather lower range of prices may be quoted, both for dividend and other mines, with, however, some exceptions. We consider we were right in our assumption of last week, that an increased rate of discounts might prove beneficial to the mining interest rather than otherwise, in the fact that the inquiry for mining shares has not in the least diminished, and it is probable they will receive a still further stimulus from the payment, next week, of the January dividends. The reports received since our last of the workings and production of ores of the numerous mines in favour with the capitalist are of a healthy and most satisfactory character.

In the Metal Market, Staffordshire Iron fully maintains its improvement, and Welsh is gradually assuming a better position—a large business having been done during the week at advanced rates. Copper continues steady. Lead is firm, with a good business. Tin has an upward tendency; and Tin Plates have advanced 6d. per box. Spelter is very dull.

From our statistical returns of the sales of copper ores, by ticketing in Cornwall and at Swansea, given in another column, it will be seen that the amount raised and sold in Cornwall in the quarter ending 31st Dec. last was 39,343 tons, producing 3103 tons of fine copper, realising 210,122*l.* 7s. 6d., and an average price of 5*l.* 6s. 9¾d. per ton: this is an excess over the quarter ended Sept. 30, 1850, of 949 tons, and 5930*l.* 19s.; over the corresponding quarter of 1849 of 2835 tons of ore, 293 tons of fine copper, in money 16,677*l.* 16s., and on the average price 1s. 2½d. The excess on the total Cornish sales of 1850 over 1849 was 8690 tons of ore, 568 tons of fine copper, 76,825*l.* 17s. in money, and 4s. per ton on the average price. On the Swansea sales, on the contrary, there has been a decrease on the previous quarter of 3447 tons of ore, 76,409*l.* 17s. in amount, and 1*l.* 17s. 3d. on the average price. On the corresponding quarter of 1849 of 2069 tons of ore, on the amount 43,688*l.* 13s., and 1*l.* 2s. 6d. on the average price; and the year 1849 exceeded that of 1850 by 1880 tons of ore, in money 17,019*l.* 1s. 6d., and in the average price 3s. 7d. per ton.

By referring to our Share List, which is arranged on a new, and, we trust, improved plan, the business done in the various mines will at once be seen.

The sale of copper ores at Redruth, on Thursday last, amounted to 3546 tons, producing 16,868*l.*

East Wheal Rose has sold 74 tons of lead ore; the Newtonards 100 tons, at 11*l.* 1s. per ton; the Callington 39 tons, at 18*l.* 0s. 6d. per ton; Tregorden 5 tons, at 27*l.* 15s. 6d. per ton.

Tregorden Mine sold 5 tons of ore to the Tamar Smelting Company on Tuesday, at 27*l.* 15s. 6d. per ton.

There was a sale of Court Grange ore last week, to Messrs. Walker, Parker, and Co.—21 tons, at 17*l.* 3s. These mines look well.

The two-monthly sale of silver-lead ores from South Tamar, 88 tons, realised 14*l.* 18s. 6d. per ton.

The sampling at Tamar Mines is computed 75 tons of rich silver-lead ores.

The Balnoon Consols continues favourable; a considerable improvement of the lode in the shaft is mentioned, it being now worth 50*l.* per fm.

At Alfred Consols, the lode in the winze sinking under the 60 fathom level is from 10 to 12 ft. wide, and is stated to be worth at least 150*l.* per fm.

In East Crowndale an improvement is noticed, the 40 and 50 fm. levels looking much better, and the lode in the 40 end, east of middle shaft, is large, with a good leader of tin on the north wall 8 in. wide. The prices of the last parcel of tin sold were 44*l.* 15s., and 23*l.* 10s. per ton.

At South Tolgus the discoveries of ore during the past month have been about 235 tons, and the raisings 205 tons, the present prospects being more than equally favourable.

At East Tolgus a lode has been cut in the eastern adit level, and driven on a few fms.; but it has so far been poor, and has a very flat underlay.

The West Wheal Towan report gives a favourable account of the state and prospects of the mines. The pitwork and engine work excellently, and the water is very easily kept. Stamps are to be immediately erected to return the tin stuff.

At Tywarnhayle the 90 fm. level east is looking better than ever, and is worth 60*l.* per fm. The lode in Bennett's shaft is also very productive, but the water has increased considerably, to draw which rods are now being put in. The lode in the 80 west has much improved; it is 4½ feet wide, and produces 4½ tons of ore per fm. The 40 west, on United Hills lode, is looking very kindly.

From Cardiganshire, we learn that the water-wheel will be ready at Guskis early in the spring, and there is every indication of a good mine.

The winze in Daren is holed to Francis's level, and they are stoping in good lead and copper on the back of Francis's adit.

The 45 fm. level west at Bwlch Consols continues in good ore, as does Doran's shaft, now 6 fms. under the 45.

At Bronfloydd, good ore in the adit eastward, the rise, and the shaft.

The ore ground in Caegynon is also very good.

The adit at Gellerheirin has not yet met with any very considerable quantity of ore.

The ore at the Welsh Potosi is 2 ft. wide, quite solid, and very hard.

At Allt-y-Crib, the ore is good in the western end, worth 25*l.* per fm.; the new machinery works well. The first sampling will be in next month.

At Cwmsebon, there is good ore in the 40, 50, and 60 fm. levels eastward.

At Penrhiw, they have a very orey lode, in sinking a surface shaft in Bryngarw, and in the stopes over the 35, at the engine-shaft, also in the 35 and 25 fm. levels eastward.

At Cwmystwith, the 36 fm. level south is in a lode producing 2½ or 3 tons of lead ore per fathom. In the 36 east the lode will turn out 1 ton per fm. There are now 26 fms. of very good ore in this level. The lode in Kingside adit is looking better, and has had some fine spots of ore in it.

A dividend has been declared by the Mining Company of Scotland.

At the North Pool meeting, the accounts for September and October were examined and passed, showing—Balance from last account, 794*l.* 18s.; ores sold (less dues), 3776*l.* 7s. 9d. = 4571*l.* 5s. 9d.—To costs and merchants' bills, 2047*l.* 18s. 11d.—By dividend of 15*l.* per share, 1500*l.*: leaving balance in favour of adventurers, 1023*l.* 6s. 10d.

At the Spearne Consols meeting, on Monday, the accounts for the four months, ending October, were passed, showing balance in favour of adventurers, 865*l.*, when a dividend of 5*l.* per share (640*l.*) was declared—leaving balance in favour of adventurers, 225*l.*

At the Balleswidden meeting, on Tuesday, the accounts for Sept. and Oct. were passed, and a dividend of 7s. 6d. per share (602*l.*) was declared, leaving balance in favour of adventurers, 1505*l.*

At the East Wheal Reeth meeting, it appearing that a large sum was due on the last call, a resolution was adopted, declaring the forfeiture of such unpaid shares. For the present the operations, except at the adit, are suspended, with a view to the introduction of steam-power. For providing further capital, a call of 5s. per share was made.

At the Praed Consols meeting, it was decided that the business of the mine should, in future, be conducted in London, and the shares increased from 512 to 1024, to be divided among the shareholders. Mr. Gray explained the prospects of the mine very satisfactorily to the meeting, stating that a quantity of ore is now at surface, and that there is every prospect of its being a dividend-paying mine shortly.

At the Caradon Vale meeting, a balance was shown against the adventurers of 52*l.* 15s. 1d., and a call of 7s. 6d. per share was made. A report of the operations on the mine will be shortly published.

The mine accounts at the Wheal Russell meeting show a balance against the adventurers of 365*l.* 12s. 2d. A proposition was brought forward for increasing the number of shares from 1024 to 4000, the decision of which was left till the next meeting; 42 tons 5 cwts. were sampled on Dec. 23.

At the George and Charlotte meeting, there was a trifling balance in favour of adventurers. A call of 2s. 6d. per share was made, and the shares increased to 1024. The agent's report generally is favourable as regards the workings now in progress.

At a special meeting of the finance committee of Lamherooe Wheal Maria, on Thursday, the balance-sheet presented showed—Calls received, 20,674*l.* 19s. 2d.; portion of November costs unpaid, 118*l.* 18s. 6d.= 20,793*l.* 17s. 8d.—Cost of the mine to end of Nov., and in London to end of Dec., 20,490*l.* 13s. 2d.; assets and cash, 303*l.* 4s. 6d.—leaving balance in favour of the mine, 184*l.* 6s. 1d. A call of 10s. per share was made, being the last instalment of 2*l.* per share, made 27th December, 1849. Reports from the purser and agent were read to the meeting of the most satisfactory character, both as to its present condition and prospectively.

At the East Crowndale meeting, the report stated that the workings had been confined to sinking the middle shaft to the 50 fm. level, extending the 28 and 40 fm. levels east and west, and stoping the backs. As yet, the returns had been inconsiderable, but still sufficient to meet the current expenditure, while a large extent of ground had been laid open. In the 20 fm. level the lode had fluctuated, which had caused some disappointment; but an improvement was apparent in the character of the lode in the 40 fm. level, and a good course of ore was confidently anticipated, from which profitable results may be expected. The mine accounts showed—Balance last account, 101*l.* 10s. 2d.; tin sales, 3324*l.* 19s. 9d.=3424*l.* 19s. 9d.—Expenditure, 3343*l.* 1s. 2d.: leaving balance in favour of adventurers, 83*l.* 8s. 9d. The committee, in conclusion, express their belief that the mine will become profitable.

The accounts submitted to the Runnaford Coombe meeting leave a balance in the hands of the bankers of 77*l.* 7s. 7d. Cash received on calls, and from other sources, 661*l.* 6s. 6d.—By cost for Oct., 99*l.* 7s. 4d.; for Nov., 96*l.* 1s. 8d.; paid for lease, 88*l.* 10s.; on account of steam-engine, 300*l.*—leaving balance as stated. The accounts were passed. The mine agents' report states that the lode has been very much disordered, but is now looking more settled. It was agreed that the management of the mine should be offered to Mr. Evan Hopkins, at a salary of 100 guineas per annum, and a committee was appointed to wait upon that gentleman for that purpose.

At the Pentire Glaze and Pentire United meeting, it was resolved that the recommendations in a joint report by Messrs. Rowlandson and Dunstan be carried into effect. This recommendation was to clear away the backs and other orey ground at present in sight, in the most rapid manner consistent with economy, and to drive northward in the 22 fm. level, in order to arrive at the orey ground gone down in the 10 fm. level.

At the Carvannall meeting, on Tuesday, the accounts for October and Nov. show—Balance end of Sept., 279*l.* 17s.; Oct. cost, 237*l.* 12s. 8d.; November ditto, 233*l.* 8s.=750*l.* 17s. 8d.—By cost, divided 2*l.* 2s. 5d. per share, 279*l.* 19s.; by call, 264*l.*: leaving a balance against the mine of 206*l.* 18s. 8d. The balance, or 4s. per 1056th share, was divided and paid to the purser, and a call of 6s. per 1056th share made, for the prosecution of the mine.

At the Botallack meeting, the accounts for July, August, and September were passed, showing—Labour cost, 1747*l.* 11d.; carriage of materials, tin stuff, &c., 295*l.* 9s. 6d.; merchants' bills, 585*l.* 2s. 4d.=2627*l.* 13s. 9d.—Balance last account, 43*l.* 15s. 10d.; tin sold (less dues, 79*l.* 19s. 11d.), 1839*l.* 19s. 9d.; copper sold (less dues, 24*l.* 3s. 9d.), 556*l.* 7s. 6d.; sundries, 8*l.* 5s. 6d.=2448*l.* 8s. 7d.: leaving balance against adventurers, 179*l.* 5s. 2d. The want of sufficient stamping power has prevented the raising of a greater quantity of tin, otherwise the accounts would have presented a more favourable appearance.

The West Caradon accounts for Sept. and Oct. show—By ores sold, and carriage (less lord's dues, 311*l.* 8s. 6d.), 4672*l.* 5s. 1d.; carriage of materials, &c., 33*l.* 19s. 10d.=4706*l.* 4s. 11d.—Purser's, agents', and counting-house expenses, 83*l.* 12s. 8d.; enginemen, smith's work, &c., 178*l.* 6s. 11d.; tribute (exclusive of materials), 1057*l.* 3s. 1d.; tutwork (ditto), 900*l.* 16s. 6d.; pitman, surface work, &c., 349*l.* 7s. 2d.; charges on ores, 586*l.* 15s. 3d.; parochial rates, doctor, and club, 52*l.* 3s. 6d.; materials, 845*l.* 17s. 4d.; sundry labour cost, 10*l.* 19s. 2d.—showing balance, being profit, 641*l.* 3s. 4d.; add from last account, 198*l.* 7s. 11d. = 839*l.* 11s. 3d.—No dividend declared.

The Gonamena accounts for September and October show—Labour cost, 176*l.* 2s. 6d.; materials, 16*l.* 2s. 9d.=192*l.* 5s. 3d.—Balance from last account, 96*l.* 7s. 10d.: leaves 95*l.* 17s. 5d. against adventurers. They have 30 tons of ore for sale.

The Craddock Moor accounts for Sept. and Oct. show—Balance from last account, 98*l.* 17s. 10d.; by call of 10s. per share, 105*l.* 10s.=204*l.* 7s. 10d.—Labour cost, 76*l.* 9s. 6d.; materials, 18*l.* 18s. 7d.—leaving balance in favour of adventurers, 108*l.* 10s. 9d. A call of 10s. per share was made.

The Tokenbury accounts for Oct. and Nov. show—By calls, 510*l.*—Balance from last account, 313*l.* 17s. 9d.; labour, 76*l.* 11s. 8d.; materials, 13*l.* 4s. 9d.—leaving 106*l.* 5s. 10d. in favour of adventurers. A call of 1*l.* per share was made. [The reports are among our Mining Correspondence.]

The Wheal Caroline accounts for Sept. and Oct. show—By call of 1*l.* per share, 100*l.*; sale of tin, 58*l.* 4s. 10d.=158*l.* 4s. 10d.—Labour cost, 142*l.* 13s. 1d.; lord's dues, 2*l.* 5s. 1d.—leaving balance in favour of adventurers, 13*l.* 6s. 8d. A call of 2*l.* per share was made. At a meeting of Wheal Mary Consols adventurers, at Liskeard, it was deemed expedient, to distinguish the new working of Mary Consols from the old concerns of Wheal Mary and Wheal Sisters, to adopt the new name of "Wheal Caroline." The engine, which should have been completed, according to the contract, in the early part of last month, not being yet at work, a fine of 30s. per week for eight weeks, was, therefore, due from the contractor; it was agreed, however, under all circumstances, to reduce the fine to 20s. per week, provided the engine be at work within a week.

At the Wheal Carpenter meeting, the purser's account exhibited a balance in favour of adventurers of 242*l.* 9s. 10d., all costs being fully paid. Very satisfactory reports were read from Capts. Seccombe and Dunstan, and others, which will be found elsewhere. A committee was appointed to consider the propriety of substituting water-power instead of steam, and it was resolved that the engine-shaft shall be sunk as soon as possible. Capt. Hitchins states that, when at the mine, he broke some stones of lead ore, producing 14 in 20 for lead, and 26 ozs. of silver in a ton of ore, worth from 14*l.* to 14*l.* 10s. per fm.

At the West Wheal Frances meeting, the accounts for Aug., Sept. Oct., and Nov., were examined and passed, showing—Balance from last account, 502*l.* 5s.; costs and merchants' bills, 818*l.* 18s. 11d.=1321*l.* 3s. 11d.—By call in Aug., 1024*l.*: leaving balance against the adventurers of 297*l.* 3s. 11d.—A call of 1*l.* 10s. per share was made.

At the Heignston Down Consols two-monthly meeting, the accounts showed a balance, on the last two months' operations, of 132*l.* 6s. 4d. in favour of the mine. On an estimate of receipts and payments for the next two months, there is a balance against the mine of 487*l.* 6s. 3d., to meet which a call of 2s. 6d. per share was made. The mine cost for Oct. was 310*l.* 14s. 9d.; for Nov., 309*l.* 0s. 4d.; and the estimated cost for the next two months' workings is 600*l.* In his report, Capt. Richards expresses a sanguine impression as to the profit of the adventure at increased depth. [The report will be found among our Mining Correspondence.]

At the West Wheal Treasury meeting, the accounts for August, September, and October were submitted, showing—Balance from last account, 1081*l.* 11s. 1d.; costs and merchants' bills, 1826*l.* 17s. 3d. = 2908. 8s. 4d. —By ores sold, &c., 1420*l.* 5s. 9d.: leaving balance against adventurers, 1488*l.* 2s. 7d.—The balance was divided and collected.

At the West Ding Dong meeting, the accounts for five months ending October were examined and passed, showing—To costs and merchants' bills, 391*l.* 4s. 9d.; by calls received, 240*l.* 10s.: leaving balance against adventurers, 150*l.* 14s. 9d.—A call of 7s. 6d. per share was made.

At the half-yearly meeting of the Mining Company of Ireland, held on Thursday, a detailed report of the directors was read, stating that the prospects of the company had considerably improved, and still more favourable returns are anticipated from the company's present operations. In Knockmahon Copper Mines some valuable discoveries had been made, from which satisfactory returns may be expected. The assets of the company, including mineral produce, machinery, &c., are stated in the report to be 159,681*l.* 18s. 6d., and the liabilities only 16,816*l.* The produce of the mines since the previous report has been expended in researches and the erection of machinery, leaving a surplus of 339*l.* 9s. 5d.—the various improvements being effected without trenching upon the company's capital.

At a general meeting of shareholders of the Company of Copper Miners in England, held on Thursday, John Henry Pelly, Esq. (Deputy-Governor) in the chair, the minutes of the former meeting having been read and confirmed, a long and desultory conversation ensued, when it was ultimately decided the meeting should be adjourned until the 14th inst., in order that some arrangements might be effected with the debenture holders, to resuscitate the company. The debenture holders are to have a private meeting on Tuesday, when the course they intend to pursue will be decided upon. The bill for the amendment of the company has been deposited in the Bill Office of the House of Commons, and a speedy solution of the company's difficulties is anticipated.

In Foreign Mines, transactions have taken place in Cobre, Copiapo, National Brazilian, St. John del Rey, and United Mexican.

At a meeting of the North British Australasian Company, held at Edinburgh, the supplemental report of the directors recommended the issue of preference shares to the amount of 25,000*l.* No definite resolution, however, was come to on the subject; and a conference was subsequently held. From the statements of Mr. Black, elicited at the meeting, it would appear that the property, of various descriptions, belonging to the company in Australia and New Zealand, is most valuable, requiring only effective management to render it the means of re-paying all their losses. Much dissatisfaction was expressed at the conduct of the chief manager of the company in Australia. The meeting was ultimately adjourned to the 9th instant.

The advices of the St. John del Rey Company are from the 8th October to the 28th, and give the produce of the workings for September, which amounted to 21,196 oits., equal to rather more than 203½ lbs. troy. The supply of stone had been abundant, and a decided improvement is noticed in two of the mines, while in East Quebra Panella a falling off is mentioned. The cost for Sept. was 4652*l.* 9s. 11d., and the produce 7634*l.* 18s., leaving a profit of 2982*l.* 8s. 1d. In Bahu Mine there has been some delay in the operations, on account of a change observable in the direction of the richest part of the lode, rendering it necessary to turn the shaft towards the south. The gold extracted to Oct. 18 was 6980 oits., from 387 cubic feet of sand, the result of 10 days' stamping. The chief obstacle complained of is from the killas in large quantities coming up from the Bahu Mine, which is now likely to be overcome. There is also a further account of the gold extracted from Oct. 14 to 28—viz., 13,308 oits. from 767 cubic feet of sand, yielding 17¼ oits. per cubic foot. The supply of stone continued good, but the quality was inferior, the produce being affected also by the absence of the usual rich supply, caused by the suspension of sinking, and other operations.

Advices of a very encouraging tenor have been received by the National Brazilian Company, relative to the Cocaes and Cuiba Mines. The report of the superintendent of the former mines states that, in addition to some increase in the produce, there was every probability of finding some rich deposits of gold in the layer last discovered, from which samples and specimens had been taken of a very promising character. A floor of jacotinga had also been discovered, and the new discoveries had given fresh impetus to the operations. From the Cuiba report, also, better anticipations are entertained than for some time past, and the agent expresses his belief that the results of the present workings will exceed the expectations held out, and afford a larger supply of stone than for a long period. The lode in Hitchins' level was not, in his opinion, cut out by a slide, as had been imagined. A communication has been made from Hartley's level to Le Page's stopes, from which a good supply was expected. The produce from both mines, from Oct. 14 to 26, was 10 mks. 5 ozs. 7 oits. 4 grs. Elsewhere will be found the report of the directors, which contains a proposal for raising additional capital by the issue of 3000 preference shares.

Letters from Bananal, received by the Imperial Brazilian Company, contain little intelligence in addition to that published last week. It was intended to select the most promising vein intersected by the cross-cut west of Wray's shaft, and commence driving on it towards the old Morro das Almas workings. The produce from Gongo is still affected by the poor quality of the jacotinga, but better results are anticipated as the operations proceed. The gold extracted from the two mines, from Oct. 13 to 22, is stated at 6 lbs. 5 ozs. 16 dwts., and the total amount from July to Oct. 13 is, from Gongo, 39 lbs. 5 ozs. 14 dwts.; Bananal, 76 lbs. 10 ozs. 15 dwts. =116 lbs. 5 ozs. 14 dwts. A remittance of upwards of 123 lbs. of gold dust, valued about 5200*l.*, has arrived at Falmouth.

The usual weekly report from Linares states that the lode in the level west from San Anton winze is much improved, with a leader of lead ore worth 2 tons per fm. In the 31 fm. level the lode is large, yielding from 1 to 1½ ton per fm. In Shaw's shaft there is no alteration. Williams's is still sinking in a productive lode, and San Jose winze is now cleared; westward to this winze a good lode is reported as still standing, worth from 2 to 3 tons per fm., while the lode in the bottom of the winze is favourably mentioned. It is intended to communicate this winze to the 45 fm. level, driving that level west, from which good tribute ground is anticipated. In other respects the operations are going steadily forward. The total ore in stock, it will be seen, amounts to 444 tons 11 cwts.

In the Alten report a brief notice is given of the operations in each of the mines. In Raipas no change of importance had occurred, the ground being still hard as before, and the ore in No. 4 being now very much disordered; yet, as a whole, the prospects of the mine are viewed in a favourable light; about 7 tons of fine copper were expected to be raised for Nov. In United, and other mines, the hardness of the ground presented some obstacles to the works. At Old Mines the tribute operations are profitable, and as they hold out a promise of continuance, a greater number of hands will be employed next month. At Ryper's, the produce, though small, is of good quality, and at Mancur's a small quantity of rich ore is produced. At Michell's, the Nellen's lode is nearly exhausted, and the produce generally fluctuating. In the adit level driving under the precipice, it was believed that the lode would shortly be intersected.

At Messrs. Tredinnick and Co's. sale of mining shares, at the Hall of Commerce, on Wednesday, although the number of shares disposed of, in comparison to those offered, was not numerous, yet a fair amount of business was transacted, and a general disposition evinced by the company assembled to support the sale of shares by auction, which to the auctioneers was much more important, considering the period of the year, and the infancy of the principles adopted by them. The following is a list of the prices realised:—Alfred Consols, 18*l.*; Bedford United, 6*l.* 10s.; Bryn-Arian, 2*l.* 10s.; Carn Brea, 125*l.*; Cefn Gwyn, 2*l.*; Condurrow, 112; Copper Bottom, 4*l.*; Cwm Erfin, 7*l.*; Cook's Kitchen, 8*l.*; Esgair Llee, 4*l.*; East Frances, 4*l.* 7s. 6d.; Stray Park, 20*l.* 10*l.*; Tincroft, 11*l.* 5s.; Tregorden, 5*l.*; West Providence, 65*l.*; West Francis, 14*l.*; West Treasury, 7*l.* Wheal Trelawny, 50*l.*; Tremayne, 22*l.* 10s.; Wheal Harriett, 5*l.* 2s. 6d.

HULL, THURSDAY.—Messrs. T. W. Flint and Co. state that mining shares are well supported on the whole; for some stocks there is much more inquiry, and for some rather less. St. Aubyn and Grylls would find ready buyers, and there is also a demand for West Tolgus at low prices. Bedfords are steady, Wellingtons quiet, West Providence more offered, and Alfreds firm. Other stocks at present not much dealt in.—The railway market has been rather shaken by the ½ per cent. put on by the Bank of England, the effect of which, however, is wearing away.

MINING APPOINTMENTS DURING JANUARY.

6. South Frances account, upon the mine.
8. Devon Consols and other mines sampling.
9. Ticketing at Redruth, Carn Brea, and other mines.
10. North Pool setting—West Caradon, and Gonamena pay.
11. Pay at East Crofty, West Treasury, Alfred Consols, and Phœnix United Consols.
13. North Roskear account, on the mine.
14. Wheal Buller and Alfred Consols accounts on the mines. [mines.
15. Great Consols account on the mine. Sampling at Consols, United, and other
16. No copper ore ticketing this week.
17. United Mines account on the mine. Pay at Wheal Buller and Levant.
18. Pay at Great Consols, Comfort, Cook's Kitchen, Pendarves, Seton, Fowey Consols. Setting at Levant.
20. Treviskey account on the mine.

LEAD ORES

TICKETINGS FOR ABOUT 100 TONS (20 CWTS.) NEWTONARDS LEAD ORE.

Douglas Isle of Man, December 26.

Bidders.	*Price per Ton.*
Newton, Keates, and Co.—Bagillt (purchasers)	£11 1 0
Walker, Parker, and Co.—Dee Bank	11 0 0
Sims, Willyams, Neville, and Co.—Llanelly	10 13 6
Locke, Blackett, and Co.—Newcastle	10 2 6
T. Somers—Bristol	10 0 0
Pontifex and Wood—Newcastle	9 18 6
Tamar Smelting Co.—Beeralston	9 8 6

Sale at the Mine.

Mines.	*Tons.*	*Price per Ton.*	*Purchasers.*
East Wheal Rose	33	£16 15 0	Walker, Parker, & Co.
ditto	5	7 12 6	R. Michell & Son,
ditto	20	15 17 6	Walker, Parker, & Co.
ditto	9	15 0 0	ditto
ditto	7	10 0 0	ditto

Sold at Liskeard.

Tregorden	5	£27 15 6	Tamar Company.

Sold in London.

Callington	39	£18 0 6	T. Somers.

COPPER ORES.

Sampled December 11, and Sold at Swansea, December 31, 1850.

Mines.	Tons.	Prod.	Price.
Cobre	94	16⅝	£12 5 6
ditto	92	16½	12 11 0
ditto	90	16½	12 11 6
ditto	80	17½	13 1 6
ditto	53	24½	18 16 6
ditto	40	23½	17 9 0
ditto	14	20½	16 1 0
ditto	102	15⅞	12 2 0
ditto	72	23½	19 3 6
ditto	70	16⅝	12 11 6
ditto	59	24½	18 18 6
ditto	54	16½	12 3 6
ditto	9	19	14 19 0
ditto	78	15½	12 4 0
ditto	73	15⅝	12 2 6
ditto	51	24	18 11 6
ditto	44	23½	18 3 0
ditto	33	24	19 5 6
ditto	6	18½	14 9 0
Cuba	114	13⅝	10 5 0
ditto	106	12½	9 7 6
ditto	104	12½	9 19 0
ditto	97	12½	9 8 6
Cuba	83	12⅝	£ 9 17 6
ditto	26	18½	14 2 0
ditto	18	26	19 10 0
ditto	4	26	20 3 6
ditto	80	13	9 12 0
ditto	68	13½	10 3 6
Berehaven	118	10	7 12 6
ditto	100	10½	7 18 6
ditto	93	10½	7 15 0
ditto	72	10½	7 15 0
German Ore	78	5½	3 15 0
ditto	60	7⅝	5 1 6
ditto	55	7⅝	5 6 0
Knockmahon	62	7½	5 13 6
ditto	49	9½	6 13 6
Waterloo Slag	42	4⅝	3 1 0
ditto	3	12⅝	9 7 0
Kildnanne	29	7½	5 15 6
Gloster Slag	10	1⅝	0 12 0
Molony	8	17½	14 1 0
Cuba	2	71½	55 1 0
ditto	1	71½	55 1 0

TOTAL PRODUCE.

Cobre	1114	£16115	13 6	Waterloo Slag	45	£156 3 0
Cuba	700	7189	2 0	Kildnanne	29	167 9 6
Berehaven	383	2971	0 0	Gloster Slag	10	6 0 0
German Ore	193	888	10 0	Molony	8	112 8 0
Knockmahon	111	678	18 6	Cuba	3	165 3 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	273	£2974 14 8
Freeman and Co.	112	874 5 4
Grenfell and Sons	308	3285 8 8
Sims, Willyams, and Co.	155	1649 8 6
Vivian and Sons	719	6884 1 0
Williams, Foster, and Co.	630	7646 14 4
Mines Royal	138	2131 7 6
Schneider and Co.	25	473 13 3
Mason and Elkington	236	2530 13 3
Total	2586	£28,450 7 6

Copper Ores for Sale January 21.—Cobre, 802—Cuba, 340—Santiago, 365—West Kawaw, 320—Knockmahon, 160—Kaw-aw, 104—Ballynoe, 42—Paringa, 40 = 2173 tons.

AVERAGES.

	Produce.	Price.	Standard.
British	9	£ 6 17 6	£101 9 0
Foreign	15⅝	12 2 6	90 13 0
Sale	14½	£10 9 0	£92 3 6

Totals—British 578; Foreign, 2018 = 2596 tons (21-cwts.)

AVERAGES OF LAST SALE.

	Produce.	Price.	Standard.
British	4⅜	£ 2 5 6	£103 8 0
Foreign	21½	16 2 0	86 15 0
Sale	20⅝	£15 17 6	£86 16 6

Totals—British, 20; Foreign, 1204 = 1224 tons (21 cwts.)

COPPER ORES

Sampled Dec. 18, and Sold at Andrew's Hotel, Redruth, Jan. 2.

Mines.	*Tons.*	*Price.*
Tincroft	88	£3 16 6
ditto	83	2 11 0
ditto	70	4 2 6
ditto	62	2 8 6
ditto	58	4 5 6
ditto	57	6 0 6
ditto	56	3 7 6
ditto	55	3 5 0
ditto	50	4 18 6
ditto	45	4 6 6
ditto	43	4 2 6
ditto	40	1 9 6
North Roskear	107	6 9 0
ditto	97	6 8 6
ditto	80	7 8 6
ditto	74	4 16 0
ditto	73	6 1 0
ditto	60	4 17 0
ditto	57	1 19 6
ditto	54	1 7 6
ditto	51	6 17 0
North Pool	98	2 15 0
ditto	96	3 3 6
ditto	92	3 7 6
ditto	91	2 18 6
ditto	70	2 6 6
North Pool	44	£1 15 0
ditto	22	1 12 6
Consolidated	109	5 1 6
ditto	105	4 18 6
ditto	84	4 1 6
ditto	71	6 3 0
ditto	59	4 9 6
Wheal Basset	93	3 6 0
ditto	92	2 18 0
ditto	91	3 1 0
ditto	71	6 17 6
ditto	54	19 6 0
Wheal Seton	77	2 6 0
ditto	71	4 9 6
ditto	66	5 2 0
ditto	62	5 5 6
ditto	60	4 0 6
ditto	31	2 13 6
South Wh. Frances	69	8 19 0
ditto	64	5 17 0
ditto	51	8 15 6
ditto	47	6 9 6
Fowey Consols	77	7 5 6
ditto	73	5 16 6
ditto	70	5 19 6
Copper Bottom	26	6 4 6

TOTAL PRODUCE.

Tincroft	707	£2663	14 6	Wheal Seton	367	£1482 18 0
North Roskear	653	3531	8 0	South Wh. Frances	231	1743 16 0
North Pool	513	1426	9 6	Fowey Consols	220	1403 13 0
Consolidated	428	2113	5 6	Copper Bottom	26	161 4 0
Wheal Basset	401	2381	11 6			

Average Standard £110 10 0 | Average Produce 6⅝
Average Price per ton £4 15 0
Quantity of Ore 3546 tons | Quantity of Fine Copper, 240 tons 19 cwts.
Amount of Money £16,868 0 0
LAST SALE.—Average Standard £110 1 0.—Average Produce 6⅝
Standard of corresponding sale last month, 106*l.* 13s.—Produce, 6⅞.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	158	£866 10 9
Vivian and Sons	759	2388 11 6
Freeman and Co.	507	2763 15 9
Grenfell and Sons	505	2555 6 6
Crown Company	129	511 11 0
Sims, Willyams, and Co.	327	1363 4 0
Williams, Foster, and Co.	726	4542 19 9
Schneider and Co.	284	1442 2 6
Mason and Elkington	154	733 18 3
Total tons	3546	£16,868 0 0

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea 634—Tywarnhayle 449—Wheal Buller 361—Par Consols 302—Alfred Consols 209—Levant 200—Wheal Agar 46—Hawk's Point 45—South Wheal Speed 26—Cook's Kitchen 25—Evans's slag 25—Trelyon Consols 24—Wheal Towan 20.—2326 tons.

NO SALE on Thursday week, January 16.

QUARTERLY SALE OF COPPER ORES IN CORNWALL—DEC 31

Copper ores, 39,343 tons (21 cwts.)—Fine copper, 3113 tons 9 cwts.—Amount of money, 210,122*l.* 7s. 6d.—Av. produce, 7¾.—Av. standard, 102*l.* 5s.—Av. price per ton, 5*l.* 7s.

PRICES OF MINING SHARES.

It being difficult to obtain a correct knowledge of all the mines in our list, we trust that agents, and others interested, will assist us, by forwarding any additions, or corrections, with which they may be acquainted—our object being to present it as accurate as possible. We have also added a column to note the actual business transacted; but which, without the constant assistance of brokers and agents, cannot become so complete as we could wish The desirability of such a record is generally admitted, and we invite the co-operation of all parties concerned, in rendering it perfect.

Shares.	DEVON DISTRICT.	*Paid.*	*Last Price.*	*Transactions.*
4000	Bedford United (copper), Tavistock	2½	6	6¾ 6½
1280	Birch Tor and Vitifer (tin), Dartmoor	10½	4	
1024	Borrington Park (silver-lead), Plympton	½	3½	
1500	Bridford Wheal Augusta (lead), Bridford	½	—	
1040	Devon and Courtenay Consols (copper)	6	1	
1024	Devon Great Consols (copper), Tavistock	1	245	260
250	East Birch Tor (tin), North Bovey	3	3	
2048	East Crowndale (tin), Tavistock	7½	1½	
4000	East Gunnis Lake Junction (copper)	¼	1	
9000	East Tamar Consols (silver-lead)	1½	1½	
2048	East Wheal George (cop.), Walkhampton	1	10	
512	East Wheal Josiah (copper), Tavistock	1½	2	
4000	East Wheal Russell (copper), Tavistock	½	6 8	
248	Exmoor Eliza (copper), South Molton	11	10	
1500	Hennock (silver-lead), Hennock	2	3	
1024	Kingsett and Bedford (lead and copper)	3⅜	3	
1744	Lamberooe Wheal Maria (copper & tin)	11	10	
1024	Moditonham & Marrabro' (copper & lead)	1½	2½	
1024	New East Crowndale (copper and tin)	2	2	
1024	North Wh. Robert (copper), Walkhampton	2	2	
1000	Peter Tavy and Mary Tavy (copper)	2½	6	
512	Plymouth Wheal Yeoland (tin), Plymouth	6½	6	
2048	Runnaford Coombe (tin)	2⅜	3½	
256	South Friendship Wh. Ann (copper & tin)	30	28	
9600	Tamar Consols (silver-lead), Beeralston	4	5	5 5½
256	South Molton (lead)	12½	12½	
1024	South Plain Wood (copper), Ashburton	2½	6	
9000	South Tamar (silver-lead), Beer Ferris	1	1¾ 2½	1¾ 2¼
687	Tavy Consols (copper), near Tavistock	8	4	4½
1024	West Downs (copper and tin), Whitchurch	2	2½	
1024	West Wheal Friendship (copper)	3	3	
4000	West Wheal Russell	¼	1	1 1¼
1070	Wheal Adams (lead), Christow, Exeter	13⅜	16	
1024	Wheal Crebor (copper), Tavistock	2½	2¾	
1024	Wheal Emily (antimony and lead)	3	5	
1024	Wheal Fortescue (copper), Tavistock	4½	6½	
764	Wheal Franco (copper), near Tavistock	13½	10	12 14
126	Wheal Friendship (copper)	120	120	
1024	Wheal Hamlyn, near Oakhampton	¼	1	
2048	Wheal Harris (lead), near Tavistock	⅜	1	1¾ 2½
2000	Wheal Langmaid (lead)	¾	1	1¼ 2
1024	Wheal Mary Ann (copper), Bridestow	—	1½	
5000	Wheal Providence, South Sydenham	¼	2	2½ 4
1024	Wheal Russell (copper), Tavistock	4	4	
	EAST CORNWALL DISTRICT. FOWEY, CALSTOCK, LISKEARD, ST. AUSTELL.			
3650	Bawden (silver-lead)	⅛	⅛	
1024	Bodmin Consols (lead), Wadebridge	4	4	
5000	Bodmin Moor Consols (tin and copper)	1	3	4½
—	Bodmin Wheal Mary (tin)	5	6½	
1000	Butterdon (lead), Menheniott	1½	8	8 9
1000	Callington (lead and copper), Callington	28	6	6 6½
4000	Calstock United (copper)	5	5	
1168	Caradon Great Cons. (cop.), Linkinhorne	7	3	
1536	Caradon Vale (copper and lead), St. Ive	1½	⅝ 1½	
3000	Carthew Consols (cop. & lead), Wadebridge	4	7	
500	Comblawn (lead), Callington	5½	4½	
1000	Coombe Valley Quarry (slate), St. Ginnis	5	2	
211	Craddock Moor (copper), St. Cleer	28	7	
2560	Drake Walls (tin and copper), Calstock	6½	2½	1½ 2½
1024	East Polgooth (tin)	6	7½	
1024	East Sharp Tor (copper)	5	8	
1000	East Trescoll (tin), Lanivet, near Bodmin	1	2	
494	Fowey Consols (copper), Tywardreath	40	30	
256	Gonamena (copper), St. Cleer	46	15	
2000	Great Beam (tin)	5	7	
1024	Great Sheba Consols (tin and copper)	2	4	4 5
3072	Great Wheal Mitchell Cons. (cop.), Lanivet	3	5	
512	Gt. Wh. Rough Tor Con. (cop.), Camelford	29	20	
6000	Growa Slate Company, Camelford	5	5	
1024	Hawkmoor (cop.), Calstock, Gunnis Lake	5	7	
6000	Heiguston Down Con. (copper), Calstock	2½	2½	
512	Herodsfoot (lead), near Liskeard	27	14	
1000	Holmbush (lead and copper), Callington	23	20	20¼
6000	Marke Valley (copper), Caradon	10	1	
128	Metha (lead) Newlyn	34	—	
256	Mineral Court (tin), near St. Austell	22½	40	
128	Par Consols (copper), St. Blazey	55⅝	650	
2048	Pentire Glaze (silver-lead), St. Minver	5	9	
5000	Roche Rock (tin), Roche, near St. Austell	1	1	
5000	Rocks Mine (tin), Roche, near St. Austell	5	5	
256	South Caradon (copper), St. Cleer	5	200	200 210
256	South Trelawny (lead), near Liskeard	31	6½	6¼ 7
256	South Wheal Josiah (copper), Calstock	2	4	
999	St. Minver Consols (silver-lead)	1	6	
128	Tokenbury (copper), St. Ive, Liskeard	7½	7½	
2048	Trebell Consols (tin and copper), Llanivet	1½	1½	
512	Treburget United (lead), St. Teath	—	—	
5000	Tregear Consols (antimony & silver-lead)	1	2	
256	Tregorden (silver-lead) Wadebridge	10	8	5
256	Trehane (silver-lead), Menheniot	1½	15	
512	Trethevy (copper), St. Cleer	7	5	
512	Treville (lead), Lewanick	1⅝	6	
5000	Warleggan Consols (copper)	¼	⅜	
256	West Caradon (copper), Liskeard	20	98	97½ 105
512	West Fowey Con. (tin & cop.), St. Blazey	40	60	
1024	West Par Consols (copper), St. Blazey	10	11	
2500	West Polgooth (tin), St. Ewe & St. Mewan	5	7	
2048	West Wheal Rose (lead)	2½	2½	
300	Wheal Arthur (lead), near East Wh. Rose	17	50	49
2048	Wheal Arthur (copper), Calstock	2	2	
256	Wheal Benny (copper), Calstock	19½	5	
1024	Wheal Bray (copper), Alternum	11½	—	
2324	Wheal Calstock (copper), Calstock	9	9	
1000	Wheal Grose (silver-lead, copper, &c.)	¼	¼	
1000	Wheal-an-Grose (tin), St. Columb Major	5	5	
256	Wheal Kingston (copper and silver-lead)	½	1	
6000	Wheal Langford (copper and silver-lead)	¼	2	
1024	Wheal May (silver-lead and copper)	1½	1	
512	Wheal Mary Ann (lead), Menheniot	5	60	60 63 65
3000	Wheal Penhale (lead and copper)	2⅝	6	
1056	Wheal Sarah (silver-lead), St. Kew	5	5	
512	Wheal Sophia (silver-lead), Lezant	7	7	
512	Wheal Spry (copper and lead)	⅛	⅛	
1100	Wheal Trescoll (tin), Lanivet, Bodmin	8	6	8
520	Wheal Trelawny (silver-lead), Liskeard	3⅜	44	47½ 50
256	Wheal Tremaine (copper), St. Ervan	11	2	
1024	Wheal Venton (silver-lead), Liskeard	3⅜	9	9½ 10½
910	Wheal Vincent (tin), Alternum	5½	7	
128	Wheal Violet (tin and copper)	5	2½	3½
184	Wheal Vyvyan (copper and tin)	60	60	
	ST. AGNES, NEWLYN, AND PERRANZABULOE.			
107	Budnick Consols (tin), Perranzabuloe	52½	10	
128	East Tywarnhayle (copper), St. Agnes	5	9	
512	East Wheal Leisure (copper)	8	38	21 30
128	East Wheal Rose (silver-lead), Newlyn	50	550	600
262	North Wheal Leisure, Perranzabuloe	1½	1½	
1160	Perran St. George (copper and tin)	21½	20	35 40
1000	Polberro (tin), St. Agnes	15	—	
500	Tywarnhayle (cop.), Illogan & St. Agnes	60	37½	47½
100	Wheal Friendly (tin), St. Agnes	70	65	
4000	Wheal Golden (lead), Perranzabuloe	2	5	
128	Wheal Vlow, Perranzabuloe	3	5	
	GWENNAP DISTRICT.			
1056	Carvannall (copper), Gwennap	3	11	
128	Comfort (copper), Gwennap	65	100	100 105
96	Great Consols (copper), Gwennap	1000	250	
252	Lanarth Consols (copper), Gwennap	10	8	
96	Tresavean (copper), Gwennap	10	130	220
120	Trethellan (copper), Gwennap	5	18	
120	Treviskey and Barrier (copper)	130	240	270
200	United Mines (copper), Gwennap	150	140	
120	West Trethellan (copper), Gwennap	15	20	
3275	West Wheal Jewel (tin and copper)	12	2	
512	Wheal Trefusis (copper), Gwennap	6¾	20	19½
	REDRUTH DISTRICT.			
1000	Carn Brea (copper and tin), Illogan	15	120	125
1024	East Buller (copper), near Redruth	2	6½	6½ 7
128	East Carn Brea (copper), Redruth	4	3	
256	East Seton and Wheal Maude, Redruth	4	4	
256	East Tolgus (copper), Redruth	4	9	20
256	Grambler and St. Aubyn (copper)	80	38	
1024	North Buller (copper), Redruth	3	10	11½
1200	North Wh. Buller, or Gt. South Tolgus	5	7	
256	North Trefusis (tin and copper), Redruth	1	2 3	
256	North Tolgus (copper), Redruth	5	14	13
256	South Tolgus (copper), Redruth	16	165	150 160
5000	Treleigh Consols (copper), Redruth	6	2½	2½
128	West Buller (copper), Redruth	10	750	
500	Wheal Daniell (copper), Chacewater	5	—	
182	Wheal Elizabeth (copper), Redruth	19	52	
990	Wheal Mary (copper), Redruth	14½	7½	
128	Wheal Plenty (copper), Redruth	29	39	
126	Wheal Union (copper), Redruth	40	40	20
512	Wheal Selena (copper), Redruth	1	1½	

Shares.	ILLOGAN DISTRICT.	Paid.	Last Price.	Transactions.
2560	Cook's Kitchen (copper and tin), Illogan	15½	10	10 9½
128	East Pool (tin and copper), Pool, Illogan	24½	145	
94	East Wheal Crofty (copper), Illogan	125	110	
256	East Wheal Frances (copper), Illogan	2½	4½ 5½	4½
6000	North Wheal Basset (copper and tin)	—	—	
100	North Pool (copper and tin), Pool	45	420	
2000	South Carn Brea (copper), Illogan	—	—	
1100	South Dolcoath (copper), Illogan	6	3	23 25
256	South Wheal Basset (copper), Illogan	10½	315	315 320
124	South Wheal Frances (copper), Illogan	75½	640	
6000	Tincroft (copper and tin), near Pool	7	11½ 12	11 12 12½
940	West Tolgus (copper), Illogan	13½	11	7½ 8½
512	West Wheal Frances (copper), Illogan	5½	14	14½
500	West Wheal Towan (copper), Illogan	9	14	12½
1000	Wheal Agar (copper), Illogan	6	6	
	CAMBORNE DISTRICT.			
1000	Camborne Consols (copper), Camborne	7	—	
256	Condurrow (copper and tin), Camborne	40	115	112
1000	Copper Bottom (copper), Crowan	10½	10 11	4
256	Crane and Bejawsa (copper), Camborne	8	8	
180	Dolcoath (copper and tin), Camborne	252	18	
1026	Gustavus Mines (copper), Camborne	5½	6	6 5½
320	Nansegollan (tin and copper), Camborne	2	2	3
140	North Roskear (copper), Camborne	10	160	
1026	Pendarves Consols (copper), Camborne	3	5	5½ 6½
1000	Pendarves and St. Aubyn (copper)	5	12	
1000	Stray Park and Camborne Vean (copper)	15	20 22	20½
1200	Tolcarne (tin and copper), Camborne	4	4	
200	West Seton (copper), Camborne	65	180	
2560	Wheal Harriet (copper), Camborne	1	4	
198	Wheal Seton (tin and copper), Camborne	107	300	250
267	Wheal Tryphena (tin and copper)	40	30	
256	Garras (lead), near Truro	43	23	
	WEST CORNWALL DISTRICT.			
5120	Alfred Consols (copper), Hayle	3	18	18 19
1024	Balleswidden (tin), St. Just	9	10	
128	Balnoon Consols (tin), Uny Lelant	48	50	
40	Bolowall and Nanpean (tin), St. Just	16	16	20
128	Boscean (tin), St. Just	10	10	20
60	Bosorn (tin), St. Just	5	6	
100	Botallack (tin and copper), St. Just	182	200	168
1000	Carbona (tin and copper), Crowan	5	10	
1024	East Balleswidden (tin), Sancreed	1	1½	
256	East Godolphin (copper), Crowan	13½	12	
1000	East Wheal Reeth	½	1	1
2500	Georgia Consols (tin), St. Ive's	2½	7	
512	Great Wheal Baddern (tin and silver-lead)	20	84	
512	Hawke's Point (copper), Uny Lelant	7	6½	
256	Lelant Consols (tin), Uny Lelant	53	18 19	18 20
160	Levant (copper and tin), St. Just	—	175	
1000	Lewis (tin and copper), St. Erth	17	21	
1024	Mill Pool (tin and copper), St. Hilary	1	3½	3½
2000	North Levant (tin and copper), St. Just	5	5	
512	North Wheal Vor (tin), Breage, Helston	—	5	
1024	Penzance Consols (tin), Sancreed	1½	1½	3
512	Praed Consols	1	1½	
560	Providence Mines (tin), Uny Lelant	20½	30	
300	South Speed (copper and tin), Uny Lelant	15	30	
128	Spearne Consols (tin), St. Just	20	60	75
256	St. Aubyn and Grylls (copper and tin)	2½	8½	
94	St. Ives Consols (tin), St. Ive's	80	80	
280	Spearne Moor (copper), St. Just	30	40	
1024	Trannack and Bosence, St. Erth	1	6	13
1024	Trannack United Mines (tin and copper)	1½	4	
600	Tregardock	1	5	
150	Trelyon Consols (tin), St. Ive's	7½	25	
2000	Tronance (copper), Helston	6	8	
604	Trowan Consols (tin), Towednack	7	10	
100	Trumpet Consols (tin), near Helston,	95	80 90	
1024	Wellington Mines (copper and tin)	6½	16	17
1024	West Alfred Consols	5	9	10½ 11½
1024	West Ding-Dong (tin)	1½	8	
512	West Providence (tin), St. Erth	10	58½	65 67
1024	West Wheal Treasury (copper), Gwinear	8	5	7 7½
1024	West Wheal Virgin (tin), Sancreed	½	2	
256	Wheal Albert (copper)	10	28 29	
128	Wheal Ann	—	—	
3072	Wheal Augusta (tin), St. Just	¼	¼	3
120	Wheal Bal (tin), St. Just	10	14	
256	Wheal Carpenter (tin and copper)	2	5	
268	Wheal Courtenay (copper)	20	23	
1000	Wheal Guskis (tin and copper), St. Hillary	½	3	
216	Wheal Henry (copper), Kea, near Truro	25	12	14
112	Wheal Margaret (tin), Uny Lelant	79	180	
1024	Wheal Neptune (copper), Perranuthnoe	1	2	
1080	Wheal Oak, near Helston	1½	1½	
120	Wheal Reeth (tin), St. Ive's	41	150	
128	Wheal Squire (copper), St. Erth	5	5	
1000	Wheal Susan, Breage and Crowan	1	3	
1024	Wheal Tremayne (tin and copper)	9½	20½	21½ 22
1024	Wheal Trelusback, Stythians	5	6	
128	Wheal Pollard (copper), St. Cleer	15½	—	
210	Wheal Prospect	4	7	
	WALES.			
1248	Allt-y-Crib (silver-lead), Talybont	5	—	
1500	Bishopstone (silver-lead), Glamorganshire	2½	10	
8000	Blaenavon (iron)	50	12½	
10000	British Iron, New, regis. (iron)	12	8	
—	Ditto ditto, scrip	10	10	
2000	Bronfloyde (lead)	—	—	3½ 4
2400	Bryn-Arian (lead), Cardiganshire	2	2 2½	2½
2000	Bwlch Consols (silver-lead), Cardiganshire	4	4½	
1000	Cae-Gynon (silver-lead), Cardiganshire	½	1½	
20000	Cameron's Steam Coal (coal), Swansea	10	2 2½	
200	Cefn Bruno (lead), Cardiganshire	6	45 50	
900	Court Grange (silver-lead), Cardiganshire	10	12	
1600	Craig-y-Mwyn (lead), Llanrhiadr, Mont	8	10	
1000	Cwm Daren	1	3	
1000	Cwm Erfin (lead), Cardiganshire	6	6½ 7	7
2000	Cwm Sebon	—	4	
128	Cwmystwith (lead), Cardiganshire	60	100	105
1000	Daren (silver-lead), Cardiganshire	2	8½ 9 10	
3000	Dyfngwm (lead)	10	3 4	
150	East Daren (lead), Cardiganshire	17	53 55	
1280	Esgair Llee Llanfihangel-y-Croythin	4½	3½ 4	4 5½
1024	Freidd Llwydd Mines (lead)	1½	3½	
1000	Gelli-rei-vin (silver-lead), Cardiganshire	1	5	
100	Goginan (lead), Cardiganshire	40	200	
100	Lisburne (lead), Cardiganshire	75	600	650
1000	Llwynmaiees (lead), Cardiganshire	9½	8 9	
3600	Llynvi Iron (iron)	50	50	
5000	Merllyn (lead), Flint	2½	5½ 5½	5½ 5½ 6
1024	Montgomery (lead and copper)	6	11½ 12	
200	Nanteos (lead), Cardiganshire	34	25	
3000	Nant-y-Car (copper), near Rhayader	—	5 5½	
4934	Pennant and Craigwen (lead)	3	3	
1000	Pen-y-bank and Erglodd (lead)	4	6	
2500	Rhoswydol and Bacheiddon (lead)	10½	—	
10000	Rhymney Iron (iron), Rhymney	50	12	
10000	Ditto New	7	3	
2048	Snowdon (copper), Carnarvonshire	3	—	
2000	South Wales Mining Company (lead)	1	1	
4000	Tyn-y-Worglod (slate), near Carnarvon	4	4 5	
1000	Tyllwyd (lead), Cardiganshire	2	2½	
2048	West Goginan (silver-lead), Cardiganshire	1½	1½ 2	
1020	West Nantymwyn	—	2	
	IRELAND.			
905	Barristown (lead), Carrick	5½	—	
1000	Dhurode (copper)	2	5	
4000	General Mining Co. for Ireland (copper)	1½	4	5½
10000	Hibernian (copper)	12½	1½	
20000	Mining Co. of Ireland (copper, &c.)	7	4½ 5	
5200	Wicklow (copper), Wicklow	5	17½	
5000	Wicklow (copper and sulphur), Wicklow	3	3½ 3¼	
	SCOTLAND.			
5000	Black Craig (lead), Kirkcudbrightshire	5	5	
1900	Keswick (lead), Portinscale, near Keswick	11	2 3	
787	Kirkcudbrightshire (lead), Kirkcud.	8½	5½ 5½	5½
	MISCELLANEOUS.			
1000	Brynlail	2½	11½ 12	
7100	Derwent (silver-lead), Durham	10	3	
10000	Durham County Coal (coal), Durham	45	9	
5000	Low's Patent Copper Company	7	7	
8000	Mendip Hills (lead), near Bristol	3½	1½	1
1500	Tregault (lime quarries)	2½	3½ 4	
1024	Weston (lead)	¼	¼	

	FOREIGN MINES.	Paid.	Last Price.
8000	Alten Mining Company (copper), Norway	14½	3
15000	Asturian Mining Company (coal, iron, &c.), Spain	15	—
20000	Australian (copper), South Australia	4	2½ 3
6000	Barossa Range (copper), South Australia	1½	½
10000	Brazilian Imperial (gold), Brazil	23	4½ 5
12000	Cobre Copper Company (copper), Cuba	40	35 35½
10000	Copiapo Mining Company (copper), Chili	14	5½ 5½
20000	General Mining Association (iron & coal), Nova Scotia	20	13½
5000	Kinzigthal Mining Association (silver), Germany	2	½
5000	Linares (lead), Spain	3	2 2½
4500	Ditto New	3	3
5051	Mexican Company (silver), Mexico	59½	—
20000	Mexican and South American (silver), Mexico	6	1 1½
5000	National Brazilian (gold), Brazil	30	2
104000	North British Australasian (copper), S. A. & New Zea.	1	¼ ⅜
7000	Royal Santiago (copper), Cuba	10	8 9
11000	St. John del Rey (gold), Brazil	15	14½ 14½
43174	United Mexican (silver), Mexico	Av. 28½	5½ 5½
10000	Worthing (copper), Adelaide, South Australia	2	2½ 3

NOTICES TO CORRESPONDENTS.

In a few weeks we shall publish the commencement of a SERIES OF PAPERS, to be continued weekly, detailing

The History of Mining,

ITS RISE AND PROGRESS:

together with NOTICES of the EARLY METHODS OF WORKING; ANCIENT and MODERN INVENTIONS, with their subsequent IMPROVEMENTS; comprising also

A SKETCH OF METALLURGICAL OPERATIONS,

from the EARLIEST PERIOD to the PRESENT TIME.

The Great Exhibition.

In the "MINING JOURNAL" will also be given a detailed description, with all necessary illustrations, of every object connected with MINING and ENGINEERING, which may be produced at the forthcoming Great Exhibition.

The Compendium of British Mining,

BY J. Y. WATSON, ESQ., F.G.S.

We have the pleasure to announce, that Mr. WATSON has consented to revise and correct, to the present time, his interesting EPITOME OF BRITISH MINES, for re-publication in our columns—the first portion of which appears in this day's Journal. In the "Compendium of British Mining," it will be remembered, the actual position of the different mines is accurately described, both as to capital and working.

At the end of each year, a copious Index is published, which renders the volume an interesting and valuable record.

"S. S."—The fact of the "Crystal Palace" not being finished by the time originally contracted for, which expired on Tuesday, is of much less consequence than the assurance which is afforded, even by the present state of the building, that it will realise the loftiest expectations formed of the plan by those who sanctioned it. The lecture of Professor Cowper was not needed to enable the spectator to estimate the elegance of its proportions, and the marvellous skill and ingenuity displayed in its construction, though it was very acceptable as a lucid explanatory description of the mechanical aids and appliances used in raising it. As far as can be judged, it will be a month at the least before anything like completion is achieved, and even then the internal arrangements and decorations will fully occupy all the time which intervenes before the "exhibition" itself commences.

"One and All" (Bodmin).—The latest Acts of Parliament regulating the Stannaries of Cornwall are 6th and 7th William 4th, c. 106, entitled—"An Act to make provision for the better and more expeditious administration of justice in the Stannaries of Cornwall, and for enlarging the jurisdiction and improving the practice and proceedings in the courts of the said Stannaries;" and 2d and 3d Victoria, c. 58, entitled—"An Act to make further provision for the administration of justice, and for improving the practice and proceedings in the courts of the Stannaries of Cornwall, and for the prevention of frauds by workmen employed in mines within the county of Cornwall."

"K." (Liverpool).—We referred your question to Mr. Campin, of the Patent Office, Strand, and he states that you rhaving entered a caveat for your improvements in the manufacture of iron, but without having completed your patent, or effected the registration of the design, will not give you any advantage over your rival, who has completed his patent for improvements in iron making since the date of your caveat. The only objection you could raise against his patent, notwithstanding that it is for the same thing as that for which your caveat was entered, would be that he (the patentee) had derived the main points of the invention from some communication or correspondence with you, or had fraudulently taken the patented invention from you. It is a point very necessary to be impressed on inventors, that the entry of a caveat will not give any other right or title than that of having notice of every application for a patent, the title of which may clash with the title given in the caveat, in which case they may oppose, and, upon just grounds, prevent the passing of the patent.

"W. R." (Tavistock),—We cannot promise compliance with our correspondent's request.

"W. C." (Bond-street).—We are now enabled to afford our correspondent the additional information required concerning the economy of the conical shadowless gas burner. From a series of very careful experiments made with this burner, it appears that, with the gas furnished by the Chartered Company, a light is given equal to 25 candles at a consumption of 8 feet per hour, and equal to 20 candles at 6⅞ feet per hour. With the gas furnished by the Western Company, there resulted the light of 24 candles, at a consumption of 4⅞ feet only per hour. The photometer employed in these experiments was Bunsen's. The burner is now being adopted by some of the principal gas companies.

"J. R."—Chemical Engineer.

"A Traveller" (Hotel, Penzance.)—We should imagine "A Traveller" has had but little acquaintance with the *Mining Journal*, or he would be satisfied we insert no statement without satisfactory authenticity. Each report is signed by the superintending agent at the mine; and we invariably published their names, until prevented by the Stamp-office authorities, who decided to charge for them, when signed, as advertisements. We have a right to expect the whole are true, as these periodical reports are for the information of the shareholders in whose employment the agents are, and by whom they are paid for their services. We know nothing of statements being written by "persons who are largely interested, and who are sellers."

"J. B. W." (Trumpet Consols.)—As we are not in possession of the entire facts of the case, or under what tenure the adventurers held the plot of land in question, it is impossible to give a decided answer to the query. There were many customs extant, and privileges claimed, by tin bounders, under the ancient laws, which were totally inapplicable to the present state of society; and several Acts of Parliament have been passed within the last 20 years to better define the Duchy rights, and regulate the Stannary laws. If the surface plot mentioned is on another company's sett, they are certainly justified in mining under it.

"A Miner" will find all the information he requires in our "Glossary of English and Foreign Mining and Smelting Terms," which can be procured of any bookseller, price 2s.

"A Sufferer" (Threadneedle-street).—We have repeatedly answered this question. The Cost-book System in itself, originally a simple, just, and honourable stipulation between individuals forming a partnership for the working of minerals, is not recognisable by the common law of England; but is peculiar to, and forms an essential part of, the Stannary laws of Cornwall. It is perfectly clear that a company cannot escape from the provisions relating to joint-stock companies, if they act as such, by merely *calling* themselves a company under the Cost-book System. Such a company must be registered, and is subject to all the regulations of the Joint-Stock Companies' Act. The exceptional clause therein relates solely to the Cost-book System, as recognised by the Stannaries' Court of Cornwall, and, as we have before said, is confined to the working of mines in that county. A somewhat similar system prevails in Germany, where a book, containing the same species of entries, is required by law to be kept in a certain class of mines.

"Ventilator" (Oldham.)—The three principal objects proposed by Mr. Blackwell in his mode of ventilating coal mines, are—1. The introduction of a sufficient quantity of air—2. Its proper distribution, and—3. The security of the arrangements to maintain this distribution and circulation. As to give a full description of the plan would encroach too much on our present space; and, as the subject from the recommendation of the jury, is likely to be of much importance, we shall fully enter upon it in our next weeks' Number.

"T. D." (Newton Stewart.)—We do not know the address of the Mr. Dickenson mentioned by our correspondent. Dent, of the Strand; Frodsham, of the Strand; Barraud and Lund, Cornhill, and many others, are deservedly celebrated for the production of accurate time-keepers.

"Typhos" (Grafton-street).—The production of ice in a red-hot crucible is now a common experiment of the lecture table, and easily accomplished. Sulphurous acid is gently poured into the centre of an iron ladle, heated to redness. The liquid remains perfectly motionless, and free from ebullition; but, on pouring in a portion of water, rapid chemical action ensues. The acid in boiling has abstracted the latent heat from the water, which is converted into a lump of ice, and which, by a rapid and dexterous motion of the hand of the operator, is turned out on the table. Crystals of ice are found constantly forming in the warm craters of volcanoes, particularly Etna—the productions of which is, doubtless, owing to the same natural law.

WEST TAMAR AND WHEAL JANE.—We received the communication of T. Tomkin at too late an hour to allow us making the necessary inquiries previous to publishing his letter.

We have been compelled to withdraw Mr. David Mushet's paper On Patent Law Reform—it shall appear in our next.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

*** It is particularly requested that all communications may be addressed—

To THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JANUARY 4, 1851.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

The commencement of the New Year naturally brings with it not only recollections of the past, but sanguine expectations of the future. The past must be considered satisfactory, if we refer only to our Share List, or to the dividends paid during the 12 months—the latter amounting to no less than 227,460*l.*, on 46 mines; while the advance in prices of shares, and the improved state of the several mines, hold out promise which, we trust, will be fully borne out, and establish mining enterprise, which we have ever contended and upheld as a legitimate application of capital. We did expect, ere this, that we might have congratulated our subscribers on the formation of a MINING EXCHANGE; but we regret to say, from some cause or other, we are yet unable to report any decisive steps towards the accomplishment of the desired object.

In thanking our readers and correspondents for the kindness they have manifested, we doubt not that at the commencement of the twenty-first volume, with the new year, they will readily give us credit for the grateful feeling with which we acknowledge past favours, relying, as we feel we may do with confidence, on their future support.

In laying before our readers the first Number of the MINING JOURNAL for the year 1851, we cannot avoid the opportunity which the occasion presents to us of congratulating the public on the vast strides which this interesting branch of commercial enterprise has made during the past twelve months, the still brightening prospects which are opening out in all our mineral districts, and the importance now attached by capitalists and parties of the more influential grades in society to the value and national importance of our subterranean wealth—an importance certainly not greater than is pre-eminently its due. We have, in another column, as is our periodical custom, inserted statistical details of the quarterly sales of copper ores in Cornwall and at Swansea, with those of lead and tin, as far as we have been able to arrive at correct results. From these returns, it will be seen that the sales of Cornish copper ores for the quarter ended 31st Dec., have exceeded those of the previous quarter by 949 tons, and 5930*l.* 19s.; of the corresponding quarter of 1849 by 2835 tons, and 16,677*l.* 16s.; and that the total sales of the year 1850 are in excess over those of 1849 by 8690 tons, and 76,825*l.* 17s. This gratifying improvement in the returns of the mining property of the kingdom, has not been the result of an unwarranted working of the mines, or prodigal sales of ore, but is to be attributed solely to the increased interest which has been excited, and greater confidence secured, in this department of enterprise, arising from improved systems of management, less attempts than formerly at chicanery and fraud, greater candour and publicity practiced by the agents, and enlarged knowledge of the subject on the part of the commercial world generally. These circumstances, acted upon by the stimulus of a removal of all restrictions on trade, have secured to us the smelting business, and opened improved markets for that staple article of Britain—copper—in all quarters of the globe. The notice in our last Number, on the "Progress of Mining during the Past Year," presents a brilliant picture of the present appearances and future prospects, not only of the more valuable and established dividend-paying mines, but of many others of high promise, which are exciting speculation. In addition to the number of those noticed, there are many others in the market, or about being put in course for regular operations; and there is every reason to believe that the present year opens under the happiest auspices, and that it will at least equal, if not exceed, in its mining results, the highly-favourable annual period which has just expired.

According to our announcement, Mr. J. Y. WATSON* has consented to revise and correct to the present time, for re-publication in the MINING JOURNAL, his interesting work, *The Compendium of British Mining*, which appeared in our columns in 1848, and with much pleasure we direct the attention of our readers to the first portion, published in another part of our present Number, and to be continued in the succeeding ones until the whole is complete. This Compendium, it may be remembered, not only gives a full description of the general mode of working mines with the greatest economy, and with a view to produce the most profitable results, but also contains a full description of every mine brought before the public for the employment of capital and skill; and as since the publication in 1848 numerous mines then in full operation, or paraded before the public as holding out splendid indications of wealth, have been abandoned, and as many others of high promise, and, indeed, entirely new mining districts, have been brought into operation, it will be the author's earnest aim and endeavour to give correct details of the principal mines now on the Share List, as far as he can possibly obtain them, as to the amount of capital employed, dividends paid, nature of the strata and the district, with the present position and future prospects of the undertaking.

Notwithstanding that until within the past quarter of a century the nature of mining operations was but little known, or even guessed at, beyond the districts in which they were carried on, the very mystery and speculation attached to researches being made deep in the earth's crust, has ever possessed an interest and a charm to the uninitiated; thus as scientific knowledge has become extended, the interest in mining adventure has correspondingly increased; and while 40 to 50 years since the capital for mining adventure was confined to Cornwall, and a few other districts, in the present day every large town has a share market, and London a mining proprietary, equal in proportion to the amount of capital involved in any other national investment. Previous to the first publication of Mr. WATSON's work in 1843, the only publications extant which gave any elucidations of the nature of Cornish mining were Mr. ABBOTT's work, published in 1833, and the old essay of PRYCE—the latter extremely rare. Mr. ABBOTT's work, though valuable to the practical man, was not of an elementary nature, and did not go sufficiently into the details of operations, or explain the technicalities in such a manner as to have induced the curious reader eagerly to peruse its pages. If the publication of a popular work on this subject was of importance some years since, it is doubly so at the present moment, when a largely-increased amount of capital is employed in mining pursuits, and which is daily increasing; and with the hope, and, indeed, conviction, that a large mass of information on mining subjects will be highly acceptable to our readers, we have commenced the new year with the introductory portion of the volume, to be continued until complete.

The taking up a sett, forming a company, and bringing shares into the market, is a somewhat different affair to what it was even a comparatively few years since. The day of mining bubbles may be considered as passed; and to bring out an adventure with any success, at least something like tangibility and *bonâ fide* intentions must be shown. In the preface to Mr. WATSON's first edition are some remarks, which are so applicable to mining speculation, as well past, and at the present, as to all future periods, that we shall close these observations by their insertion:—

To enter indiscriminately into mining speculations, without regard to locality or choice, in the faint hope that one or two may turn up prizes, and redeem those that fail, is certainly a dangerous adventure; for a judicious selection is as necessary as the skill and judgment of an effective management. But as *all* mines, however well selected, cannot be expected to prove profitable, it is advisable to invest in more than one undertaking—a division of risk necessarily diminishing the effects of a partial loss, and insuring a greater degree of success on the aggregate of undertakings. Great coolness and patience are also required in entering on these speculations; for many have from mere temporary causes of depression, arising from no fault of the mine, become frightened, and sold out at a heavy loss, when, by remaining quiet, they might eventually have realised large profits. There may also be depressions in the market for ore, when it is advisable not to sell the usual quantity per month, although it may lessen the dividend, until a re-action takes place; but this should not, as it too often is, be considered a falling off in the mine; for in the well-conducted, the ticketing must not be solely looked to as the criterion of the state of the mine.

OUR SHARE LIST.

With the assistance of our correspondent at Redruth, we are enabled to present the Share List in a greatly improved form. We are anxious to render the list as perfect as possible, and cordially invite agents, shareholders, &c., to forward us any corrections, or additions, which will be at all times thankfully received. Notices of calls, dividends, and copies of reports, are particularly solicited.

FRENCH DUTIES ON ENGLISH COAL.—A public meeting of merchants, coal and shipowners, most numerously attended, was held at Sunderland on Monday last.—W. MORLEY, Esq., was called to the chair.—The meeting was unanimous in the expression of opinion that the present rate of duty levied on coal imported into France was highly injurious to the commercial and shipping interests of the north of England, and that the unequal manner in which the duties are levied has limited the intercourse between the two countries, and obstructed the natural expansion of trade. It appears, from a letter read from Lord Stanley, that the British Government are in communication with that of France, and such demonstrations as the meeting at Sunderland presented will powerfully aid them in their effort. We trust many more such meetings will follow, and thus keep up the agitation until the object is attained.

* Of the firm of Watson and Cuell, St. Michael's-alley, Cornhill.

STATISTICS OF COPPER, LEAD, AND TIN.

With the expiration of the terminal quarter of 1850, and the introduction to another year, we proceed to lay before our readers the results of the periodical sales of copper ores by public ticketing in Cornwall, and at Swansea; as also those of lead and tin, the quantities of the two latter descriptions of minerals the nearest to accuracy it has been in our power to obtain. The quantity of Cornish copper ores sold during the past quarter has been 39,343 tons, realising 210,122*l.* 7s. 6d., being an average price of 5*l.* 6s. 9¾d. on a produce of 7·887 per cent., and requiring 12 tons 14¼ cwts. to produce a son of fine copper. As compared with the returns of the quarter ended Sept. 30 last, the result is as follows:—

	Copper Ore.	Fine Copper.	Amount.	Av. Price.
Dec. 31, 1850,	Tons 39,343	3103 9	£210,122 7 6	£5 6 9¾
Sept. 30, „	38,394	3104 13	204,191 8 6	5 6 4
Increase	949	Dec. 1 4	Inc. £5,930 19 0	Inc. £0 0 5¾

Showing an increase in quantity of 949 tons, and in money 5930*l.* 19s.; while, with a slightly reduced per centage in the produce, there has been an increase in the average price of nearly 6d. per ton. As compared with the corresponding quarter of 1849, the result is as follows:—

	Copper Ore.	Fine Copper.	Amount.	Av. Price.
Dec. 31, 1850	Tons 39,343	3103 9	£210,122 7 6	£5 6 9¾
Dec. 31, 1849	36,508	2810 2	193,444 11 6	5 5 7
Increase	2,835	293 7	£ 16,677 16 0	£0 1 2¾

The total amount of sales of Foreign, Irish, and Welsh ores, by ticketing at Swansea was 9143 tons, realising 114,005*l.* 7s. 6d., being an average price of 12*l.* 9s. 4d. per ton. The following is a comparison with the previous quarter:—

	Ore.	Amount.	Average Price.
Dec. 31, 1850	Tons 9,143	£114,005 7 6	£12 9 4
Sept. 30, 1850	12,590	180,415 4 6	14 6 7
Decrease	3,447	£ 66,409 17 0	£ 1 17 3

And with the corresponding quarter of 1849, as follows:—

	Ore.	Amount.	Average Price.
Dec. 31, 1850	Tons 9,143	£114,005 7 6	£12 9 4
Dec. 31, 1849	11,212	157,694 0 6	13 11 10
Decrease	2,069	£ 43,688 13 0	£ 1 2 6

The above quantity of ores was made up as follows:—

	Ore.	Amount.	Average Price.
Foreign	Tons 6692	£97,980 11 0	£14 3 11
Irish	2168	15,479 2 0	7 2 9
Sundry ores and slags	283	545 14 6	1 18 7
Total	Tons 9143	£114,005 7 6	£12 9 4

The above amount of foreign ore was from the following places:—

	Ore.	Amount.	Average Price.
Cobre	Tons 3359	£48,680 9 6	£11 9 8
Cuba	1662	18,833 13 0	11 6 7
Chili	421	9,970 13 6	23 13 8
Copiapo	433	9,042 2 0	20 17 7
South Australia	273	7,591 4 6	31 9 4
Spanish	225	1,503 18 6	6 13 8
New Zealand	126	1,470 0 0	11 13 4
German	193	888 10 0	4 11 6
Total	Tons 6692	£97,980 11 0	£14 18 9

And the Irish from the following mines:—

	Ore.	Amount.	Average Price.
Berehaven	Tons 1289	£9997 8 6	£7 15 1
Knockmahon	720	4514 13 6	6 5 5
Ballinoe	25	173 2 6	6 18 5
Kildnanne	29	167 9 6	5 15 2
Dylife	21	165 7 6	7 17 1
Molony	8	112 8 0	14 0 0
Manx	67	101 14 6	1 10 5
Tigrony	3	84 15 0	28 5 0
Cronebane	3	84 3 0	28 1 0
Ballymurtagh	3	78 0 0	26 0 0
Total	Tons 2168	£15,479 2 0	£7 2 9

The above quantities of copper ores were purchased as follows:—

Companies.	CORNWALL. Tons.	£ s. d.	SWANSEA. Tons.	£ s. d.	TOTAL. Tons.	£ s. d.
English Cop. Co.	—	—	1232	16,990 18 11	1232	16,990 18 11
Mines Royal	3382	19,556 10 6	484	6,825 5 9	3866	26,381 16 3
Vivian & Sons	6903	35,577 12 10	1644	18,080 15 0	8547	53,658 7 10
Freeman & Co.	4705	24,226 5 3	341	2,519 10 10	5046	26,745 16 1
Grenfell & Sons	6581	33,832 [illegible] 6	1309	14,877 10 11	7890	48,710 3 5
Crown Cop. Co.	745	4,301 8 9	—	—	745	4,301 8 9
Sims & Co.	5821	27,452 15 5	635	9,032 14 0	5956	36,485 9 5
Williams & Co.	8407	50,022 11 0	2486	28,582 6 7	10893	78,604 17 7
Schneider & Co.	3299	15,152 11 3	203	4,216 10 6	3502	19,369 1 9
Mason & Co.	—	—	716	11,155 0 3	716	11,155 0 3
British & For. Co.	—	—	93	1,724 14 9	93	1,724 14 9
	39343	210,122 7 6	9143	114,005 7 6	48486	324,127 15 0

PRODUCE OF THE PRINCIPAL COPPER MINES OF CORNWALL AND DEVON,
FOR THE QUARTER ENDED DECEMBER 31, 1850.

Mines.	Tickettings.	Tons.	Amount.	Average Price.
Devon Great Consols	3	4646	£29808 5 6	£6 8 4
Carn Brea	3	2218	12659 15 6	5 14 2
Par Consols	6	1718	10856 10 6	6 6 7
United Mines	5	2073	9247 16 6	4 9 9
Wheal Basset	3	1334	8440 17 0	6 6 6
Fowey Consols	6	1400	8336 7 6	5 19 1
West Caradon	3	970	8038 5 6	8 5 9
Wheal Seton and Pendarves	3	1672	7786 7 6	4 12 9
Tincroft	3	1929	7328 18 6	3 15 6
Wheal Buller	3	939	6067 9 0	6 9 2
Tywarnhayle and Nancekuke	3	1620	5979 12 6	3 13 10
North Roskear	3	904	5880 6 0	6 10 1
South Caradon	3	735	5854 5 0	8 0 0
Great Consolidated Mines	2	1186	5765 19 6	4 17 3
South Wheal Frances	3	743	5587 12 0	7 10 5
North Pool	3	1719	5404 5 6	3 2 10
East Wheal Crofty, Dudnance, and Longclose	2	1046	4979 19 6	4 15 2
Alfred Consols	3	746	4936 10 6	6 12 4
Wheal Friendship	4	614	4638 2 6	7 11 1
Camborne Vean and Wh. Francis	2	829	3352 5 6	4 0 10
Levant	3	666	3262 11 0	4 17 11
Phœnix	2	304	3138 14 6	10 6 6
South Tolgus	3	570	2974 6 6	5 4 2
Condurrow	2	630	2882 7 6	4 11 6
Treviskey and Barrier	1	425	2736 15 6	6 8 9
Wellington Mines	2	450	2684 12 0	5 19 3
Perran St. George	1	456	2623 9 0	5 15 1
Bedford United	3	361	2243 8 6	6 4 3
Tresavean	2	770	2117 13 6	2 15 0
Marke Valley	2	617	2007 4 6	3 5 0
Holmbush	2	324	1976 0 6	6 2 0
East Pool	2	582	1826 6 0	3 2 9
Treleigh	3	364	1669 5 6	4 11 8
West Wheal Treasury	2	246	1416 8 6	5 15 1
Wheal Tremayne	2	276	1311 9 0	4 15 0
Dolcoath	2	309	1225 2 6	3 19 3
Wheal Mary	3	300	1120 15 0	3 14 3
West Wheal Seton	2	241	1038 16 6	4 6 2
Wheal Comfort	3	469	981 17 0	2 1 10
West Fowey Consols	2	149	924 5 0	6 4 0
Poldice	1	146	745 18 0	5 2 2
Botallack	1	81	603 9 0	7 9 0
Wheal Ellen	1	82	594 19 0	7 5 1
Wheal Agar	3	146	577 12 0	3 19 0
West Wheal Jewel	2	118	511 12 0	4 6 7
Wheal Henry	1	66	422 8 0	6 7 11
Polberro	1	139	491 19 0	2 17 10
East Wheal Rose	1	40	375 16 0	9 7 10
St. Aubyn and Grylls	2	60	367 16 0	6 2 7
Trannack and Bosence	1	32	302 16 0	9 9 6
Pendarves Consols	1	64	289 16 6	4 10 7
Heigneton Down Consols	1	25	235 0 0	9 8 0
Wheal Squire	1	22	220 4 0	10 0 2
Wheal Pink	2	44	218 7 0	4 19 3
Boscundle	1	10	215 0 0	21 10 0
South Crinnis	1	38	210 18 0	5 11 0
Wheal Maiden	1	28	143 10 6	4 2 0
Wheal Elizabeth	1	41	142 10 6	3 9 9
Cook's Kitchen	1	29	141 7 6	4 17 6
Wheal Vyvyan	1	25	124 6 6	4 19 3
Wheal Busy	1	34	118 18 0	3 9 10
Herland	1	21	101 17 0	4 17 0
East Wheal Treasury	1	28	97 4 0	3 9 4
West Trethellan	2	36	£90 14 0	£2 10 5
Boscaswell Downs	1	13	88 14 6	6 16 6
Wheal Jewel	1	19	86 18 6	4 11 6
South Wheal Fortune	1	20	86 0 0	4 6 0
Wheal Crebor	1	24	82 16 0	3 4 10
Resprym	2	16	82 7 0	5 3 0
Wheal Tehidy	1	10	72 5 0	7 4 6
Trelyon Consols	1	12	71 14 0	5 19 6
Wheal Prosper	1	18	66 19 6	3 14 5
Wheal Banns	1	16	62 16 0	3 18 6
Polgooth	1	12	62 8 0	5 4 10
Wheal Union	1	8	54 8 0	6 16 0
Grambler and St. Aubyn	1	15	45 7 6	3 0 6
Carthew Consols	1	10	44 10 0	4 9 0
East Seton and Wheal Maud	1	7	43 4 6	6 3 6
Wheal Penhale	1	1	38 6 6	5 9 6
Boswidden	1	11	36 6 0	3 6 0
Providence Mines	1	7	33 5 0	4 15 0
Trenow Consols	1	4	31 2 0	7 15 6
Bell and Lanarth	1	9	24 15 0	2 15 0
Godolphin	1	7	20 14 0	2 19 1
Wheal Clifford	1	9	17 2 0	1 18 0
Pembroke	2	3	14 6 0	4 15 4
Total	Tons 39,343		£210,122 7 6	£5 6 9¾

LEAD.

In our returns of lead ore for the quarter ended 30th Sept., in the Journal of the 5th October, we noticed a great falling off, as compared with the previous quarter ended 30th June, amounting to 1859 tons, and in money 33,067*l.* 14s. 2d. The total sales of lead ore, by public ticketing, at Holywell, Aberystwith, London, and other places, during the quarter ended 31st Dec., give a somewhat more satisfactory result, they having amounted to 8914 tons, realising 114,997*l.* 17s. 4d., being an increase over the quarter ended 30th Sept. of 950 tons, and 17,176*l.* 7s. 2d. Still, this is but an approximation to the actual returns, as considerable quantities of ore meet ready sale by private bargain, the particulars of which do not reach us. The total sales by ticketing for the year stand thus—

Quarters.	Tons.	Amount.
Ended March 31	8586	£115,628 17 3
„ June 30	9823	130,884 4 0
„ September 30	7964	97,821 10 2
„ December 31	8914	114,997 17 4
Total	Tons 35,287	£459,332 8 9

The following are the returns from the several lead mines for the past quarter:—

	Tons.	Amount.
East Wheal Rose	992	£13913 5 0
Lisburne	655	7238 5 0
Wheal Mary Ann	351	6002 6 6
Tamar	316	5832 4 0
Wheal Trelawny	375	5502 12 6
Newtonards	260	3875 0 0
Goginan	240	3872 5 0
Laxey	200	3862 10 0
Maesysafn	325	3678 15 0
Foxdale	300	3602 10 0
Westminster	310	3507 12 6
Deep Level	300	3325 10 0
Cwmystwith	245	2676 10 0
Lloc	210	2615 15 0
Trehane	107	2424 12 6
Maesyrerwddu	221	2407 4 0
Hendre	197	2183 2 6
Bwlch Consols	145	2098 2 6
Pen-yr-henblas	175	1974 17 0
Callington	114	1911 15 0
Nanteos	167	1769 10 0
East Tamar	131	1787 12 0
Wheal Golden	135	1751 12 6
Pant-y-celyn	120	1516 0 0
Shallee	84	1396 16 4
Jamaica	120	1387 5 0
Strontian	110	1372 17 0
Cairnsmore	120	1275 0 0
Pant-y-mwyn	115	1268 15 0
South Tamar	90	1260 0 0
Glengola	112	1239 0 0
Machynlleth	95	1122 6 6
Talacre	90	1105 5 0
Coetia Llys	89	1098 6 6
Herodsfoot	75	892 12 6
Milwr	71	864 6 0
Great Wheal Baddern	61	848 19 0
Glenmalur	66	694 16 0
Pen-y-cefn	43	668 12 6
Belgraves	55	614 12 6
Holmbush	30	598 4 0
Esgair Llee	50	532 10 0
Bryntail	52	528 6 0
Cwm Erfin	33	484 5 6
South Australia	32	464 16 0
Fron Fawnog	37	460 17 0
Court Grange	27	450 4 6
Arkansas	22	433 10 0
Halkin Hall	37	426 18 0
Gartnadyne	38	404 14 0
Pentire Glaze	30	388 10 0
Keswick	35	377 12 6
Driggith	32	318 0 0
Eagle Rock	27	290 18 6
Craig-y-mwyn	25	286 5 0
Gorn	25	270 0 0
Daren	15	211 17 6
German Ore	30	180 0 0
North Wheal Friendship	14½	161 13 6
Tregorden	5½	127 12 6
Rhiwerth	9	124 8 6
Rhoswydol	7	80 13 6
Dyfngwm	6	65 8 0
Pary's Mine	3	30 4 6
Lletyn Ein	2	25 4 0
Total	Tons 8914	£114,997 17 4

Companies by whom the above lead ores were purchased:—

Walker, Parker, and Co.	Tons 2115½	£27,333 5 9
Newton, Keates, and Co.	2015	24,613 12 3
Sims, Willyams, and Co.	949½	13,116 7 3
Eyton and Co.	718½	7,994 0 7
Tamar Smelting Company	415½	7,526 9 0
Michell and Son	474½	6,788 2 3
T. Somers	507½	6,529 13 0
Panther Smelting Company	545	6,126 2 6
Locke, Blackett, and Co.	382	5,519 6 6
Mather and Co.	355½	4,066 14 0
Penpoll Company	256½	3,572 14 3
Taylor and Sons	112	1,239 0 0
J. T. Treffry	37	572 10 0
Total	Tons 8914	£114,997 17 4

TIN.

The quantity of tin for which returns of sales have been received is 146 tons 14 cwt. 1 qr. 16 lbs., realising 6730*l.* 16s., from the following mines:—

Mines.	Tons c. qr. lb.	Amount.
Tincroft	43 0 0 0	£1792 0 0
Drake Walls	26 5 0 0	1171 6 4
Budnick Consols	22 17 2 9	1123 15 7
East Crowndale	14 0 0 0	590 0 0
Mineral Court	13 11 1 15	717 11 0
Great Beam	11 2 1 20	605 16 5
Birch Tor	5 5 0 0	257 12 6
Plymouth Wheal Yeoland	4 0 0 0	194 0 0
Wheal Friendship	2 19 0 0	125 9 6
Wheal Vincent	1 8 0 14	57 15 2
Heigneton Down Consols	1 8 0 0	49 0 0
Georgia Consols	0 17 3 14	46 9 6
Total	Tons 146 14 1 16	£6730 16 0

The companies by whom the above tin ores were purchased:—

Daubuz and Co.	Tons 45 14 2 18	£2160 1 9
Calenick Company	39 1 0 5	1815 18 0
Bissoe Company	21 10 0 0	887 16 3
Williams and Co.	18 3 0 0	787 18 2
Enthoven and Co.	10 10 0 0	469 10 0
Union Smelting Company	3 0 0 0	148 10 0
Bolithoe and Co.	2 17 3 14	143 9 6
Private sale	5 17 3 7	317 12 4
Total	Tons 146 14 1 16	£6730 16 0

The entire returns of the sales of Cornish copper ore by ticketing, for the year 1850, were as follows:—

Quarter ended	Ore.	Fine Copper.	Amount.	Av. Price.
March 31, 1850	Tons 37,608	2974 10	£221,031 19 0	£5 17 6
June 30, „	39,680	3076 5	205,095 1 0	5 3 4
Sept. 30, „	38,394	3104 13	204,191 8 6	5 6 4
Dec. 31, „	39,343	3103 9	210,122 7 6	5 6 9¾
Totals	155,025	12,258 17	£840,440 16 0	£5 8 5

The returns for the year 1849 amounted to 146,335 tons of ore, producing 11,691 tons of fine copper, and realising 763,614*l.* 19s., being an average price of 5*l.* 4s. 4d. per ton. There is, therefore, an increase in favour of the past year of 8690 tons of ore, 568 tons of fine copper, and a sum of 76,825*l.* 17s. in money, and 4s. per ton on the average price.

The entire sales of the Foreign, Irish, and other copper ores at Swansea, during the year, were as follows:—

Quarters ended	Ore.	Amount.	Av. Price.
March 31, 1850	Tons 8,690	£125,751 6 0	£14 9 5
June 30, „	11,290	129,104 16 6	11 8 8
Sept. 30, „	19,190	180,415 4 6	14 6 7
Dec. 31, „	9,143	114,005 7 6	12 9 4
Total	Tons 41,713	£549,276 14 6	£13 3 4

The total quantity sold by public ticketing in 1849 was 43,593 tons, realising 566,295*l.* 16s., beihg an average price of 12*l.* 19s. 9d. per ton, and showing a falling off in 1850, as compared with the former year, of 1880 tons of ore, in money 17,019*l.* 1s. 6d. and an increase in the average price of 3s. 7d. per ton. This great decrease in the importation of copper ore, both on the quarterly and yearly averages, by no means justifies the outcry made by some parties, on the reduction of the duty, that the British copper ore market would be swamped, and the Cornish miner ruined; but, on the contrary, a firm and gradual improvement in the production of our mineral produce has taken place, and the British copper mining interest was probably never in a more flourishing position than at present.

ON THE USE OF CAUSTIC LIME, INSTEAD OF LIMESTONE, IN BLAST-FURNACES.

By E. MONTEFIORE LEVI, *Engineer of the Ougrée Blast Furnaces, and* DR. EMIL SCHMIDT, *Engineer of the Royal Asturian Company.*

Having, in 1849, undertaken a series of very extensive researches on the composition of the gases of the large coke furnaces used at Ougrée—researches which we have been prevented by other occupations from bringing as yet to a sufficiently successful termination to offer them to public appreciation, but which have furnished several very interesting results—we took a portion of gas from foot to foot from the tuyère to the mouth of a furnace, 54 feet in height, each time estimating the proportion of carbonic acid; this examination, the details of which we reserve for an ulterior communication, demonstrated clearly that very nearly the whole of the carbonic acid disengaged from the limestone is converted into oxide of carbon in its passage through the incandescent coke. We observed that the decomposition of the limestone takes place much lower in the furnace than is generally supposed, and that at the point where that decomposition takes place the temperature is sufficiently high to allow the carbon of the coke to be absorbed by the carbonic acid evolved from the carbonate of lime. The quantity of coke thus uselessly consumed is very considerable, as the following calculation, deduced from the actual present working at Ougrée, will plainly show:—

A blast-furnace, smelting 53 tons of 38 per cent. ore every 24 hours, will produce about 20 tons of iron—if, as at Ougrée, 40 per cent. of limestone are used, the total quantity is about 21 tons, containing about 9½ tons of carbonic acid; the coke consumed when limestone was used was about 150 for 100 of pig-iron, or about 30 tons per diem. Now, 9½ tons of carbonic acid may be converted into oxide of carbon by the absorption of about 2 tons 12 cwts. of carbon, or 2 tons 18 cwts. of coke with 11 per cent. of ash, the proportion of coke, which is hereby uselessly absorbed, is equal to 9·74 per 100 of the total quantity which is charged into the blast-furnace. Struck with this remarkable result, we acquired the conviction that, notwithstanding the fuel and labour necessary for the manufacture of lime in separate kilns, there would yet be a real and considerable advantage gained by using it instead of limestone; the fuel generally used for lime burning is of inferior quality, and as its combustion is so managed that it is converted in burning into carbonic acid, a maximum proportion of the heat that it can produce is rendered available; it appeared to us, moreover, evident that the great absorption of heat by the carbonic acid in its passage from the solid to the gaseous state no longer taking place, not only could the quantity of ore charged for a given proportion of coke be augmented, but, moreover, as the elaboration of the ore would take place at a higher point of the furnace, the descent of the charges might be hastened, and the production of the furnace augmented.

Consequently, carrying our ideas into practice, in the month of June, 1849, lime was used in lieu of limestone in the furnace No. 3 of Ougrée. The result during the few first days did not answer our expectations, but we were not long in discovering the cause of this unsuccessful result. No more than the theoretical proportion of lime had been used—that is to say, 56 for 100 of the carbonate; but, necessarily, it was very far from being pure; there was, therefore, an insufficient quantity, and thence dark coloured slags and difficult working. This fault was promptly remedied by an augmentation in the proportion of lime, which was carried to 63 for 100 of limestone. From that moment, the behaviour of the furnace became most regular and excellent; the proportion of ore was augmented, and the number of charges multiplied. From that period lime has constantly been used in that furnace, and invariably with the most favourable results. Eighteen months continual use of lime in this furnace, and six months in another (furnace No. 4 of Ougrée), during which period above 15,000 tons of pig-iron have been manufactured by the use of quicklime, have proved in the clearest and most positive manner, not merely the augmentation in the daily production and the diminution in the quantity of coke used, which we did foresee, but also a remarkably ameliorating influence on the whole bearing of the furnace, of which we could have had no previous idea.

Here are the proportions of coke used for the production of 100 of pig-iron, during some months of 1849, according as quicklime or limestone was used:—

LIMESTONE.		QUICKLIME.	
March	150	July	142
April	154½	August	138
May	156½	September	132
June	151½	October	139
		November	142
Average	153·2	Average	138·6

Average with limestone	153·2	100
Ditto with lime	138·6	90·4
Difference	14·6	9 6

It may thus be seen that the economy is 9·6 per cent. of the coke employed—figure which corresponds in a most striking manner with that of 9·74, to which we had already arrived by calculation. Rarely have we seen provisions founded on purely theoretical considerations so fully confirmed by the practical results.

At the commencement of 1850 two new furnaces were put in blast at Ougrée, the existing kilns being insufficient to supply with lime more than one furnace, and the managers of the works, considering the experience of the last six months as putting the advantage of the use of lime beyond a doubt, asked of the board of directors of the company the authority to erect new lime-kilns, so as to be enabled to supply with lime the three furnaces; but the directors were of opinion that the experiments already made did not suffice to prove in general the advantage of the use of lime—the favourable result obtained might have been produced by an excellent state of the only blast-furnace where the experiment had been tried, and that, perhaps, independently of the use of lime. For the purpose of deciding this question, quicklime was used instead of limestone in furnace No. 4, which had during several months been working in a regular manner, using limestone as a flux; the result was immediate, and very soon a similar diminution in the consumption of coke, augmentation in the daily production, and general good working were observed, as in furnace No. 3.

The accompanying table shows the quantity of coke for 100 of iron, and the production during 28 days for six months of 1850—first, for furnace No. 1, using limestone as flux; second, for No. 3, using lime; and third, for No. 4, using limestone during three months, and lime during three months. All the furnaces being built after precisely the same model, using the same ores, and producing white or mottled pig-iron by cold-blast.

Date, 1850.	Coke for 100 Pig-Iron. No. 1. Limestone.	No. 3. Lime.	No. 4. Limestone.	Production during 28 days. No. 1. Limestone.	No. 3. Lime.	No. 4. Limestone.
April	165	145	163	Tons 436	601	459
May	165	147	159	447	582	461
June	160	147½	164	477	583	488
			Lime.			Lime.
July	161	146½	149½	462	555	537
August	158½	145	146	465	536	552
September	153	147½	146	477½	577	600
Average	160½	146½	—	461	573	—
Average, April to June—Limestone				162		Tons 469 6 4
Ditto July to Sept.—Lime				147½		563 9

It appears, by this table, that the quantity of coke consumed is diminished 14 to 15¼ per 100 of iron, and the production in a given time is increased by 22 to 24 per cent.

Although, as a flux, lime must necessarily come to a higher price than its carbonate, yet by its use is the cost of pig-iron very much diminished, and the profits are multiplied, on account of the increased production. We do not consider ourselves authorised to furnish here details of the cost price; but we can affirm, with confidence, that the increase of annual profit secured by this innovation is from 25,000 fr. to 30,000 fr.

Hitherto the opinion of metallurgists has been rather unfavourable than otherwise to the use of lime: Karsten, and after him other writers, establishes the existence of this prejudice, without being able to assign for it a sufficiently plausible reason. M. Valerius (*traité de la fabrication de la fonte*) says, "It is said that the use of lime causes the production of scoriæ rich in iron, white cast-iron, &c.; and to explain this bad effect it is remarked that the calcination of the limestone in the blast-furnace produces a very considerable diminution in the temperature, which prevents the ore from arriving too soon—that is, before the oxide of iron is reduced into a region of the furnace where the heat is sufficiently great to allow of the action of the oxide of iron upon the silica." Such a reason appears to us very ill founded; the sole effect of the lowering the temperature will be to allow the ores to arrive imperfectly reduced to a zone of fusion, just as we every day have the opportunity of observing when the ores are wet. The effect of the absorbtion of heat caused by this moisture is the production of black slags, white pig-iron, &c., precisely the contrary of what it should be if M. Valerius's reasoning were exact; but common sense alone suffices to show that a constant cause of cooling in the furnace cannot possibly be advantageous. M. Ebelmen, in his interesting researches on the reduction of iron ore in blast-furnaces, observed the considerable cooling effect of the carbonic acid, and the retardation which it causes in the reduction of the ores; yet he did not remark the conversion of the carbonic acid from the limestone into oxide of carbon. The following figures are taken from analyses made by M. Ebelmen, of a calcareous ore which had remained for some time at different depths in the blast-furnace:—

	Original ore.	At 8 feet.	13 feet.	15 feet.	17 feet.
Carbonate of lime	36·8	41	40·6	26·6	—
Quicklime	—	—	—	4·	37·4
Peroxide of iron	36·2	37	27·8	24·1	—
Protoxide of iron	—	traces	12·7	17·5	30·2
Metallic iron	—	—	—	—	10

The height of the furnace was 27 feet; at 15 feet the carbonate of lime had scarcely undergone a commencement of decomposition. M. Ebelmen adds the following remarks—"It appears to me that the cause of the very sudden variation in the rapidity of reduction of the ores must be attributed to the disengagement of carbonic acid from the limestone. It may be remarked that, in the third experiment, the ore has lost a small portion of its carbonic acid, and in the fourth the whole of the lime is in the caustic state—thus the disengagement of the carbonic acid coincides in a striking manner with a sudden variation in the temperature of the furnace, and in the rapidity with which the ores are reduced. There is nothing surprising in this, as Bischoff's experiments have proved that carbonic acid absorbs a large proportion of latent heat while passing from the solid to the gaseous state. The gases which pass through the furnace must, in traversing the zone where the calcination of the limestone takes place, lose a portion of their sensible heat, which becomes latent, while their reductive power is diminished, either on account of the lowered temperature, or because of the considerable admixture of carbonic acid.

In conclusion, we are, as far as we are aware, the first who have succeeded in substituting with success and economy lime for its carbonate in blast-furnaces. The Ougrée Company, now fully convinced of the immense advantages derivable from the use of lime, is occupied with the construction of kilns heated by the blast-furnace gases.—*Liege, Dec.* 21.

Original Correspondence.

WASTE GASES FROM THE BLAST-FURNACE.

Sir,—I am sorry to perceive, from the paper in your Journal of the 21st of December, that the promising expectations entertained by various correspondents last spring, as to the economical use of the waste gas of the blast-furnace, have not been fully realised. It would be matter of great regret if the time and means which have been devoted to effecting this great economy should fail of their reward. I, therefore, propose to forward you, probably next week, some suggestions directed to the removal of the particular drawbacks the operation is said to encounter. That the economy will be complete—that is to say, that there will be *no loss in* the furnace to diminish the balance of gain *out of it*, I have never believed; and have argued the point with those who were sanguine and positive that the furnace would not lose one fraction of its power. But some of the evils complained of may certainly be alleviated. They appear such obvious consequences of some of the arrangements which were detailed by your correspondents, that I confess I was as much perplexed as pleased to find they made no mention of such results. The information was not full enough to satisfy me, and I have been always waiting for the remainder which was promised. If your correspondents, who advanced this interesting topic, are actually contending with the disadvantages detailed in the paper in question, I hope I may be able to furnish them with a little assistance in the contest.—David Mushet: *Dec.* 26.

ON THE ECONOMICAL APPLICATION OF WASTE HEAT FROM BLAST-FURNACES.

Sir,—The two letters which have recently appeared in the *Mining Journal* on the above subject are of much importance to pig-iron makers generally, but in particular to those who have already adopted the plan, or may have determined upon so doing. The substance of Mr. Damsel's communication to the *Journal of the Franklin Institute* is, no doubt, obtained from actual experiment, and certainly does not augur very favourably for the ultimate success of the project; for if it can be thoroughly proved that a reduction of make follows its adoption, the real merits of the discovery are at once apparent. The saving effected in fuel in the first instance will not compensate for a diminished production, and probably a deteriorated quality, which *must* result from a repeated "scaffolding" of the furnace. There is a strong probability that the charging ring employed will promote the formation of a core in the body of the furnace corresponding with its own area, and, to a certain extent, prevent the *equalisation* of the heating surface, especially to those materials that are behind it, or immediately under the dome of the furnace. This being the case, "slips" from the sides of the furnace will frequently occur, and these falling into the mass below suddenly causes an interruption. A derangement of the regular process then ensues; its effect is seen by the colour of the cinder given off, and, as a consequence, a deviation in the *quality* of the iron produced.

There are other causes, however, which will bring about similar effects in the working of a furnace, which are well known to the trade; the point for consideration, therefore, is whether the evils complained of, and attributed to the process in question, are of a *permanent* character, or can easily be remedied? Two instances, within my own knowledge, furnish the most contradictory evidence; in one case an *increase* has followed the adoption of the plan, while in the other a *decrease* in the make has occurred, and yet I apprehend the same system was pursued in both cases; the difference may possibly be accounted for by the operation of *local* causes. There is a natural tendency in a blast-furnace to work hottest in the middle, because *there* is the concentration of heat; but the more regular and closer the materials can be got round the sides of the furnace, and the more *equally* these are brought under the influence of the heating power, the better will the furnace work; any variation from the requisite degree of heat will assuredly interfere with a proper fusion of the materials. To induce the profitable working of a furnace, it should be kept *uniformly* hot; and should it be satisfactorily ascertained that, by the plan in question, an indraught of air is created beyond what is necessary, a bad effect must follow. But it will not require a very long period to test the efficacy of the plan, especially when pounds, shillings, and pence, are so deeply involved in it. Its introduction is as yet limited, but is, nevertheless, sufficient for the purpose of trial.—E. Talbott: *Tipton, Dec.* 31.

ON THE LAMINATION OF RAILS.

Sir,—During the last nine months I have had occasion to travel rather considerably by railway, and, in passing along some of the lines, was very much struck with the extent of lamination which some of the rails had undergone. The shape adopted, in most cases, is the "double head," with an original running surface of 2½ in., and which, in some instances, I found to be spread to nearly 5 in., or twice the original size; a spreading of 1½ to 2 in. was most common. Now, in proportion to the extent of *bearing* surface will be the friction caused, and, as a matter of course, a corresponding influence will be exerted upon the power of the engine, entailing upon it a greater amount of wear and tear, and a larger expenditure of fuel; besides, owing to such lamination, relays become frequent, by which railway companies are subject to no small cost. Now, lamination in railway bars can as surely be prevented as the sun shines in the heavens. A certain mode of manufacture will be necessary to effect it, which will subject the manufacturer to an extra cost in proportion; and if railway companies will not pay such extra cost the evil must continue. Makers are to be found who will do full justice to such an article, but it is only reasonable that they should obtain in return value for value. The intrinsic worth of an article must be measured by its positive utility, and that utility may surely be questioned, when such effects are produced as now pointed out. No little responsibility devolves upon the directors of railway companies in the formation of their respective lines: they have the command of the public purse to a given extent, and with them is vested the expenditure of public money. There can be no doubt that much anxiety is felt by them, so that it may be disposed of economically, and, acting under the influence of such feeling, they willingly accept an article of low price, and, perhaps, fancy themselves fortunate in making such a purchase; whereas, in reality, it is decidedly against them, as the sequel has invariably proved. The directors of railway companies may depend upon it, that in any future contracts that may be given out for rails, they will best promote the interests of their proprietors, by obtaining such an article as will *truly* answer the purpose. It is a bad policy to drive a bargain of the kind too close; manufacturers, when so restricted, will endeavour to save themselves from loss, and are compelled to adopt *such* a mode of manufacture, and employ *such* materials, as will indemnify themselves.

Tipton, Jan. 1. E. Talbott.

THE INSPECTION OF MINES—MINERS' READING CLUBS.

Sir,—Your pages have borne ample evidence of the great interest you feel in whatever has a tendency to ameliorate the condition of the miners, and you have ever shown the utmost readiness in granting the use of your columns for diffusing information in relation to this important subject. There can be no doubt but that your valuable Journal has had a most beneficial influence in obtaining for the miner the small amount of protection which has been doled out to him by the Legislature in the last session of Parliament, and we may reasonably hope that your continued and unabated efforts may be crowned with increased success. Although four months have elapsed since this Act became the law of the land, during which period from 150 to 200 men have been killed in the mines, we are still without any evidence of its practical administration, save in the appointment of four inspectors for the whole of Great Britain. Without prejudging the real practical value of this measure, there is scarcely any rational grounds for anticipating any very great benefits from it. It is but fair to wait for the results of its operation, but whatever these may be, the advocates for an efficient and thorough system of inspection, ought not to rest satisfied until a more complete measure be obtained. From the great interest which one of the leading members of the present Government has long shown on this subject, and to whom the miners are indebted for this Act, it may be presumed that this is only a precursor to a better law, and is, probably, intended to be a means of obtaining correct information as to the legislation really required. Viewing it in this light, the Government is entitled to the gratitude of the country, and if such be the intention of the Minister, it is to be hoped he will receive the energetic support of the public to any improved measure he may introduce into Parliament.

In the meantime, it ought to be borne in mind that legislative enactments, however well administered, and however beneficial they may be to a certain extent, still there are many existing evils which exercise a prejudicial influence on the condition of the miners which may be alleviated without Government interference. One of the most prominent of these is the too general ignorance of that class of men to whom the superintendence and constant vigilance of the underground operations are entrusted. The establishment of adult as well as juvenile schools in the mining districts, and the institution of reading clubs, where parties unable to read could hear information relating to their avocations, would be highly beneficial. If these clubs were liberally patronised by the owners, and assisted by the supervision of the viewers or engineers, with their advice and occasional attendance, they would speedily become an efficient means of removing the present evil, whilst the boy's school would prevent the recurrence of such a state of things in future years. Most men placed in responsible situations are fully sensible of the disadvantages under which they labour from their inability to read, and although they might, and many probably would, object to be taught to read, they would eagerly listen to others, and gladly avail themselves of this mode of acquiring information relating to their daily avocations. These clubs might be supplied by loans of books for perusal, or be connected with some adjacent public library from which they could be obtained, and merely have contributions sufficient to pay the subscription to the neighbouring library or mechanics' institution, and to purchase such newspapers and periodicals as might be deemed expedient. If no better place of meeting could be had, they might assemble at each other's houses, or at some one more eligible than the rest, so that the expenses should be kept down to the lowest possible amount, and constitute no barrier to the free admission of as many as possible. It is always desirable to render such institutions independent of the pecuniary assistance of the employers and managers, which might be effected in the way suggested, whilst the patronage of their superiors might be beneficially exercised by lending them suitable books and journals, and by occasionally reading to them, or by attending their meetings, and giving them such explanations and illustrations of the subject under consideration as they might deem necessary. That the adoption of some such plan is practicable, and that if adopted and persevered in, it would be very beneficial is obvious, and it is to be hoped that some of your many readers who may have opportunity will give it a fair trial, and communicate the result in your columns. J. Richardson, C.E.

Neath, Dec. 26.

THE ABERDARE COLLIERY EXPLOSION.

Sir,—I observed in the *Times* of the 28th Dec. a report of the adjourned inquest on this event, which is extremely inaccurate. Among other misrepresentations, certain statements are ascribed to me, as evidence, which do not bear the most remote resemblance to that which I did offer to the Court. To prevent the possibility of misrepresentation, I did not give my evidence verbally, but read a written statement which I had prepared. This was subsequently placed in the hands of the coroner. I enclose you herewith a copy. I think you will agree with me, that the responsible and difficult duties which the inspectors of coal mines have to perform on these occasions cannot be efficiently discharged if their evidence is misrepresented. I have, therefore, to request that, if convenient to you, you will print this document, *in extenso*, in your next paper. As it was read in a public court, it is now public property. J. Kenyon Blackwell.

Statement read to Jury on the Adjourned Inquest, Dec. 20, *by J. Kenyon Blackwell, Esq.*

Having examined the Dyffryn New Colliery, in conformity to my duties as inspector, I have to state that I have no doubt of the correctness of the evidence already given, with regard to the origin and immediate cause of the explosion.

With reference to this accident, I beg to offer the following remarks:—This colliery has recently commenced working. It is to the depth of, and at a distance from all the other collieries in the Aberdare Valley. It is sunk to a seam of coal which is well known to be very fiery, and in which many very serious explosions have taken place.

Fire-damp exists in coal-seams, apparently not in combination with the coal, but in a state of condensation in their fissures, and also in the fissures of the other measures in contiguity with them, to which it has been able to penetrate from the coal and carbonaceous strata which are its original sources. The degree of pressure under which fire-damp exists is often very considerable, and is found to augment with the depth of the seam, provided no channels have existed for its escape, either by percolation through the strata above, by faults, or by workings in the seam. When coal seams thus highly charged with this gas are newly opened, sudden and large discharges (in addition to the constant exudation from the pores and cleavage planes of the coal) frequently take place, on penetrating the larger and more extensive fissures which exist in it, or from the rupture of the roof or floor, either from the superincumbent weight, or the pressure of the condensed gas contained in the strata which form them. The indications of such a state of pressure on the fire-damp of coal mines are always evident to experienced miners, and I have elsewhere stated that in such cases the exclusive use of the Davy lamp in mines in this state is the only effectual safeguard. But a large and perfect ventilation is also necessary in such seams, since the Davy lamp itself is liable to accident, especially if long exposed to an explosive atmosphere.

In the Dyffryn New Colliery the seam of coal worked is evidently in the condition described—viz., highly charged with fire damp in a state of condensation; naked lights were used in it, and this explosion appears to have taken place from a sudden discharge from the roof of the seam, in one of the stalls, at the period of the first weight or rupture of the strata, from working, which came on in the pit.

Though I recommend the exclusive use of the Davy lamp in such a colliery as that under consideration, an efficient ventilation is also a most important requisite to safety; and, in my opinion, if it had existed, it would probably have prevented the accident which has occurred.

It appears to me that the means taken to produce a circulation of air in the pit, by the placing of a fire grate in the upcast shaft, were not adequate. The entire disproportion between the area of the shafts and of the air channels in the pit ought to be remarked. The following facts also compel me to conclude that the ventilation in the pit must have been very weak:—It was confined to a single column, which was compelled to force its way in one current successively through a great number of small and insecure air passages. From the inefficient nature of the motive-power (the fire grate or lamp) applied to produce a circulation, there could be little air moved; while, from the character of the air channels in the pit, it would be liable to return, by leakage, back to the upcast shaft, without traversing the whole of the pit; and there must have also existed much impediment to its motion, by friction, from the smallness of the area of the air passages. It is also to be remarked that it was liable to immediate and complete stoppage by falls, which were likely to take place throughout a large extent of the single and insecure air passage to which it was confined. The great number of doors required to preserve in operation the system of ventilation adopted in this pit ought to be observed, as they rendered it extremely insecure, and so great a number was unnecessary, if the circulation had been properly arranged. I, therefore, conclude that, if a more efficient ventilation had existed in this pit than what appears to have been the case under the system adopted, it is probable that this accident would not have occurred.

Looking at the plan of the colliery now before me, I am compelled to say that the works in progress are defective in their arrangement, and that a better contrived and more complete formation of air channels, to insure a larger circulation of air, ought to have been effected before the workings of the coal had been commenced. Even in the works as now carried out, a better and safer ventilation would have been obtained by dividing the air into three columns or currents—viz., one for the east level, one for the west, and one for the north cross-heading. And further, by adopting regulators at the exit into the return air way, instead of doors in the waggon road, as less liable to accident, to determine the amount of air in each current.

For the future and extensive working of the colliery, however, better arranged and more secure return air ways, possessing areas more proportional to the downcast and upcast shafts than those now in progress would be required; for, unless these be provided, neither the number of shafts, nor their magnitude, nor the amount of motive-power in furnaces, steam-jets, or other means, will produce efficient ventilation. I have elsewhere pointed out the principles on which the proportions which ought to exist in these parts of mines may be calculated. It is important that these proportions should be observed, both in the area of the shafts and in the air passages of a mine. It does not appear to be generally known that when the furnace is applied as the ventilating power, an upcast shaft of a disproportionately large area to the column of air required is an evil, from the extra amount of fuel it requires to keep up the necessary difference in temperature (and that of weight in the two columns of air) in the upcast and downcast shafts. There is one other observation which I wish to make, on the experience derived from this explosion, showing the necessity for two shafts in all collieries, with means of ready ingress and egress for the men in all cases by the downcast shaft, and the danger which exists from the use of brattice in shafts as the means of dividing the ingoing and outgoing air. I have elsewhere stated that such shafts ought not to be used; and, when they cannot be avoided, no naked lights ought to be allowed to go below the surface in them.

In conclusion, I would observe that I think the present accident arose from the imperfect system of ventilation and lighting adopted in this colliery, and not from culpable negligence on the part of any individual. ——.

VENTILATION OF COLLIERIES—THE ABERDARE EXPLOSION.

Sir,—In the *Times* of the 1st inst., I see a statement from Mr. Blackwell, one of the Government Inspectors, anent the Aberdare explosion, from which I quote as follows:—"It does not appear to be generally known that, when the furnace is employed as the ventilating power, an upcast of a disproportionately large area to the volume of air required is an evil, from the extra amount of fuel it requires to keep up the necessary difference of temperature, and thus of weight, in the two columns of air in the upcast and downcast shafts."

It will not, perhaps, be asking too much from Mr. Blackwell to inform me, through your Journal, if I am correct in deducing the following inferences from his remarks:—

1. That there should be a standard *temperature*, consequently a standard *velocity* of air in the upcast shaft.

2. That this *given* standard of *velocity* should be maintained in all upcast shafts.

3. That the area of the *upcast* shaft must be proportioned to the requirements of the mine; thus, if the current of air in the air-courses of the mine, or in the downcast shaft, be required to travel (as in many fiery collieries) nearly at the same speed as in the upcast shaft, its area will require to be the same as the downcast, or the air-courses; or if (as in many parts of England and Scotland) the same velocity is not needed in the air-courses, or in the downcast pit, but (say) only one-half, then the area of the dowcast, or the air-course, may be nearly twice that of the upcast.

Perhaps it was something similar to this that Mr. Mushet and "J. J. A." were groping for (see *Mining Journal* of Sept. last), when they were making suggestions as to the best forms for *locomotive furnaces, sailing vessels,* and *upcast shafts.*—Steam: *Blaenavon, Jan.* 2.

ACCIDENTS IN COAL PITS.

Sir,—You deserve the thanks of the mining community for taking up the subject of accidents in coal pits; and if you will only continue your exertions in behalf of that much oppressed class—the working miners—something must be done to ameliorate their condition.

You say there must be Parliamentary interference: there is that already, if the Government would do their duty; but what else is it but a mockery and a delusion to appoint only four inspectors, when it fact 20 could not perform the duties efficiently? Mr. Blackwell is a first-rate man, and knows the wants and wishes of this district; but how can he attend to our representations, when he has so many other places to attend to? What I contend for is a thorough inspection—to have a competent person resident in each mining district, with a salary that would raise him above any influence; that his object should be the prevention of accidents by tendering advice where required, attending to the statements of the workmen where danger is apprehended, and checking the obstinacy of some overlookers, who would rather continue any dangerous plan than alter (as they say) at the dictation of the men.

Sir George Grey will no doubt say, look at the expense; but what is a few thousands per annum, when compared with the numberless lives that are annually sacrificed? Indeed, the respectable portion of the coal and iron trades would raise the salary of an inspector among themselves, rather than be subject to the imputations that are daily cast upon them, through the miserably defective ventilation and ricketty machinery of some coal-fields in this neighbourhood, where gain, and gain only, is the object. How it it possible that four men (be they ever so efficient) can supervise the vast mining interest of this kingdom? They can make a flying visit; certainly, after an accident has occurred, and report on the presumed cause, and there the matter ends, for rarely do the men read the report. Now, how much better it would be if the inspector resided in the mining district, and when danger was apprehended warn the manager of it; when, if unheeded, and an accident occurred, he would doubtless meet with deserved punishment.

Wolverhampton, Dec. 26. G. B. T.

MR. RADLEY ON THE VENTILATION OF COLLIERIES.

Sir,—In your Journal of Saturday last, Mr. Radley, Ch.E., says, "I have seen the atmosphere of an extensive colliery become *suddenly* unsafe by the infusion therein from such a cavity [the goaf] of about 1,500,000 cubic feet of carburet of hydrogen." This so far exceeds all that I have ever heard of, that I am induced to inquire if there be no mistake, either typographical, or otherwise, in the matter. Such a quantity of fire-damp being "expressed" into the workings of any ordinary colliery would have killed every animal in the mine, as the atmosphere would be void of the oxygen necessary to the support of life and combustion; and the only effects mentioned by Mr. Radley are, "the irruption of the gas was attended by a concussion, which *elevated the flames of all candles* burning in the mine at the time, and, besides, was *felt* by the *colliers* themselves." Now, Sir, if we take the mean of the areas of the passages and working places of the mine at 50 square feet, such a quantity of "carburet of hydrogen" would have filled them for a distance of upwards of 5½ miles, to the exclusion of any common air, and, therefore, would have been fatal to the men, and have extinguished the candles; and, should the length of the passages have been eight times more, or 48 miles, the whole atmosphere of the mine would have been in such a state as most certainly to have produced a violent explosion on its coming into contact with the flames of the candles. If the effect of the irruption caused only an elongation of the flame of the candles, it was an indication that there was at least 16 volumes of air to one of fire-damp—that it was not, or only slightly, explosive; and in such a case the mine must have been above 90 miles in extent, if of the presumed mean area, to contain the 1,500,000 cubic feet of "carburet of hydrogen," as stated.

At a time when, happily, so much attention is being paid to the improvement of the ventilation of mines, it is highly important that facts bearing upon the question should be correctly stated, and as circumstantially as possible; I hope, therefore, Mr. Radley will pardon me in again calling his attention to the statement, and requesting more detailed information. Mr. Radley is wrong in supposing that the valuable paper on the ventilation of mines, recently read at the Institution of Civil Engineers, was by Mr. Frank Forster, as it was by Mr. W. P. Struvé, of Swansea. In the discussions which ensued Mr. Forster took a part, as reported in your Journal, which circumstance has probably misled your correspondent. As far as I am able to comprehend his meaning, I understand Mr. Radley to say that an improvement of the means of ventilation is not so much wanted, as some "effectual mode of either preventing the formation" of goaves, and of drawing the gas out of them at safe and convenient times. The formation of goaves can only be prevented, I apprehend, by not ex-

cavating the coal—a remedy which even Mr. Radley would scarcely recommend; and he will be surprised to learn that the paper which he "declares to be contrary to his knowledge and lengthened experience in coal mining" strongly recommends the exhaustion of the goaves during the absence of the men, and shows the practicability of doing so wherever machinery is employed as a means of ventilation instead of the furnace. Nor is the possibility of thus exhausting a mine a mere matter of opinion, as it was effectually accomplished in Mr. Powell's colliery, near Cardiff, by Mr. Brunton's apparatus.—MEM. INST. C.E.: *Dec.* 30.

NATIONAL BRAZILIAN MINING ASSOCIATION.

Notwithstanding the only partial success which has followed the workings at the Cocaes and Cuiaba Mines since the discovery of the vein at the former mine, which had been overlooked for a period of 11 years, a large portion of available ground has been laid open; there are great lengths of backs, in which good veins may be expected, as being contiguous to and on some of the richest lines ever worked upon at the Cavaco, and where large quantities of gold were extracted to the west. At Cuiaba a most interesting discovery has just been made, holding out prospects seldom before witnessed at this formerly admired property. The gold is here disseminated through immense floors or layers, varying from 24 to 60 feet in thickness. In former years the productive workings were lost, and it being reported that they were worked out, the directors of the period acquiesced in a proposal for withdrawing the men from the mine, and placing them at Cocaes, where more brilliant results were expected. The directors, Messrs. Oxenford and Hamilton, being aware that it was contrary to all geological experience that a lode of such magnitude should be so suddenly and entirely annihilated, and knowing that without its discovery the great capabilities of the Cuiaba Mine must remain dormant, determined in April last to send out Capt. Samuel Bawden from Cornwall to take the superintendence of the workings. He immediately saw the erroneous views which had been taken by former agents in their endeavours to find the lode. He explained his opinions to the commissioner, and placed two men to drive 10° south of west, when in 12 days and nights, after driving through 8 feet of hard capel, the lode was cut. From Capt. Bawden's last report, it appears five waggon loads of stone had been broken, and the lode was exceedingly promising, and likely to increase in richness in depth. Reports from both Cocaes and Cuiaba will be found among the foreign mine intelligence.

For the purpose of conveying to the shareholders full information of the present position of the adventure, the directors have issued a report, and to give a more comprehensive view of the present position of the Cuiaba Mines, and the importance of Capt. Bawden's discovery, two diagrams are annexed to it—one, a section of the Cuiaba Mountain, measured from the base to the summit; and the other showing the workings in progress. From the first of these it will be seen that the mine may be worked high and dry by the safe and inexpensive means of adits to a depth of 430 ft. perpendicular from surface, or 230 ft. below the present adit; also, that it possesses the advantage of cheap and expeditious transit for the ores by an inclined plane to the stamps—a full waggon drawing up the empty one. All experience proves that the matrix at the surface of the mountain is the poorest, and that in depth it has invariably increased in richness. For instance, Reid's level gave nearly double the produce of Kinsman's, 60 ft. above it; Hartley's, 60 ft. below Reid's, will probably, from all appearance, yield a much larger quantity; and it is, therefore, not unreasonable to expect that Hitchen's level, 64 feet below Hartley's, will be richer still, and that the workings in the adit will be further productive. Whether such really be the case or not, there is in view a large field for the profitable employment of a numerous body of labourers at Cuiaba; and it is hoped, for the common interest, that it will not be necessary to relinquish what now appears the road to certain success, and results which are, to all appearance, within reach. The directors, after mature, prolonged, and painful consideration, have determined on an issue of 3500 preference shares, at 3*l.* per share, payable by instalments in Jan., Feb., and April next, to be considered in all respects as the old shares, and with this advantage that, should the affairs of the association be wound up within two years from the 1st inst., the whole 3*l.* to be returned, with interest at 5 per cent. out of the sales of the property of the association; and, if there should be any surplus, these shares to participate in equal ratio. The report, which throughout is an able, candid, and explicit document, concludes with the following remarks:—"With both these mines under a process of development, we have hesitated, and do hesitate, to wind up the concern, without giving our fellow-adventurers an opportunity of coming to the rescue. If we are supported, the concern will go on; but it is unjust, ungenerous, and unreasonable that all the pecuniary advances and responsibilities should be suffered to rest on our shoulders. We are willing to take our full proportion of the new shares. Should our fellow-shareholders do the same, it is our firm belief that they will not only preserve and increase the value of their present interest in the association, but in a very short period make a good profit on the 'preference shares.'"

A very important discovery has been communicated to the Asiatic Society of Calcutta by Mr. Piddington, the Curator of the Museum of Economic Geology, from which it appears that after 20 years' research he had at length found in the rubbish of the Deoghur Copper Mines the singular ores of silver called in Peru the pacos, and in Mexico the coloradas, which, though they contain silver in such inappreciable portions that it is only extractable to a profit by the curious Spanish process of amalgamation as carried on in those countries, yet forms the staple of the richest Mexican mines, from its vast abundance; and specimens of the ores, and of those from Mexico and Peru, as well as the silver extracted from the Indian specimens were shown, and Mr. Piddington stated that, though the season had prevented his obtaining more than a small additional supply, yet he had been able to pick out 1 lb. of it, which, wrought by the Mexican amalgamation process, had produced a good average of silver from a mere surface specimen, but that the value of the discovery would depend upon the quantity of ore found and the expense of working it. This discovery is, however, one of great importance, both in a mineralogical and a commercial view, as proving the existence in India of an ore which forms so important a feature in the mining operations of South America, and which, if found to any extent, will aid in checking the change in the value of the precious metals, which the influx of gold from California or other sourses may produce, by making India a market for the production of silver. That the discovery should be made after 20 years of patient research, within 206 miles of Calcutta, and the practicability of extracting the metal by the cheap Mexican process fully demonstrated, proves a perseverance in scientific discovery hardly to be equalled, and for which the public both here and in India, are indebted to Mr. Piddington.

QUICKSILVER.—A letter from Mr. Burnett, the Governor of California, has recently been published at Washington, in which he says—"The quicksilver mine of New Almaden, within 12 miles of this place, is valued at several millions of dollars. In a few days, Mr. Forbes informs me, they will have 26 retorts in operation, and will extract 8000 lbs. daily, worth from $6000 to $8000—more than $2,000,000 annually. This is only one of the several mines, but it is the largest." The effects of this new supply of quicksilver is already beginning to be felt. We hear from the western coast of South America, that considerable quantities have already been received there, that a great reduction of price is expected, and that already arrangements are being made both there and in Mexico to re-open many mines which have long been closed only on account of the high price of quicksilver. The great demand and the high price which have recently been experienced in Europe for silver will, no doubt, further stimulate the production. Should this view of the subject prove correct, then, while there may not be any very important change in the relative price of silver and gold, there will, at least, be a very large increase in the quantity of both, and, consequently, a slow but certain reduction in their value.

WATER LEVEL FOR THE MINES IN LOW FURNESS.—This level, which, we are informed, it is in contemplation to make, will commence at Gleaston Meadows, and pass through Stainton to Lindale. It will be 6 ft. by 4, and arched The depth at Lindale is to be 220 ft., and consequently it will be 40 ft. below Lindale Cofe Mine engine-shaft. The Duke of Buccleuch's mineral agent, Mr. Tindell, has surveyed the ground, and has expressed himself in favour of the work, which if carried into effect, will be the means of saving a great outlay to the proprietors in the working of the mines, and will be undoubtedly one of the greatest undertakings entered upon in that district.—*Whitehaven Herald.*

Messrs. W. H. Brancker and Co., of the Walthew-house Colliery have reached the far-famed "Orrell 5-feet seam" at the great depth of 450 yards. The mine is 5 feet, and of first-rate quality.

NORTH BRITISH AUSTRALASIAN COMPANY.

A meeting of this company was held at the Aberdeen Hotel, Edinburgh, on the 26th Dec. Mr. KEMP (one of the directors) in the chair.

There was a very large attendance of partners. The report of the directors, embodying Mr. Black's report to them, was read, there being, as usual, no report from Mr. Taylor, the manager in the colony. The report by the directors was generally considered to be a very indefinite and unsatisfactory document.

Mr. ANDERSON, Clochcan, put a series of questions to Mr. Black, intended to elicit the information acquired by him on his late visit to the company's properties in Australia and New Zealand, more fully and in detail than it is given in his report to the directors. From Mr. Black's statement, the partners seemed completely satisfied that the property of every description was of great value, and capable, under energetic and economical management, of yet repaying all their losses, and ultimately yielding a handsome per centage on the capital. Large returns have uniformly been drawn from the stock investments since 1844. How these have been wasted it is impossible even to guess; the accountant employed by the partners reports that there are no means of accounting for them, and the chairman, in answer to a question, stated that he could not say how much Mr. Taylor alone had cost the company in any year since his appointment. The directors moved the adoption of the report, and also that an adjourned meeting should be held, to sanction the issue of preference shares, to conver existing liabilities and current expenditure; thereupon, Mr. Anderson moved that the report lie on the table, and the meeting adjourn until next morning, to enable the partners to look their difficulties fairly in the face, and discuss such measures as may appear calculated to place the affairs of the company on a safe footing.

After considerable discussion, it was resolved that the meeting adjourn to Thursday, the 9th inst., to consider the report by the directors and supplemental report, advising the issue of 25,000*l.* worth of preference shares.

After the meeting, the directors proposed a conference with such of the shareholders as wished to converse with them on the affairs of the company. This conference took place in the cashier's office on Friday forenoon, and occupied between two and three hours. The bearing of the directors was throughout courteous and conciliatory, and at this conference the resolutions proposed by the Buchan partners in 1845 were taken up, and discussed *seriatim*. These were, in principle, unanimously approved, and the directors strongly urged on the partners present the propriety of submitting such other proposals as they might consider likely to be useful, to the consideration of the directors before the adjourned meeting. This conference appears to be the first step for some years in the right direction. No one, in or out of the direction, now attempts to defend Mr. Taylor. The accountant and Mr. Black's reports agree in fixing the embarrassments of the company on his shoulders; but it is quite clear that the directors cannot escape censure. For the first 12 months the whole blame rests with the manager, but after his accounts came, or should have come, into their hands, the cashiers and directors share deeply in the responsibility attaching to his doings. The Buchan partners proposed their resolutions in 1845, and at every subsequent meeting urged the directors to check the extravagant expenditure, and compel the manager to adopt a proper system of book-keeping, and send home regularly detailed statements and intelligible balances and valuations. Their efforts were useless, and their arguments treated with indifference or contempt. To revert to the past, however, can now serve no other purpose than to warn both the directors and shareholders to steer clear in future of the rocks on which their prosperity has hitherto been wrecked. The unanimous feeling expressed at the meeting was that the present manager must be dismissed, but his friends wish him to receive the 12 months' notice to which he would have been entitled, had he acted according to his instructions. It is obvious, nevertheless, that the prosperity of the company depends greatly on his immediately leaving; and a large proportion of the partners will insist on this point, even should it lead to placing the co-partnery under the provisions of the Winding-up Act. It would also be very desirable to have an office belonging to the company, with a salaried secretary as their servant. These matters will come before the adjourned meeting on the 9th inst., from which good results may be hoped, if the advice so often tendered in the *Mining Journal* to shareholders thus peculiarly situated, "to make mutual concessions," be steadily and sincerely acted upon.

NEW METHOD OF PREVENTING INCRUSTATIONS IN STEAM-BOILERS.—Mode of preparation, by M. Saillard, of Nantes:—Catechu, 100 lbs.; subcarbonate of potash, 50 lbs.; subcarbonate of soda, 50 lbs.; common resin, 10 lbs.; lime, 20 lbs.; water, 300 lbs.—1. Boil for 20 minutes the subcarbonate of potash and soda with the lime and resin, with 200 parts of water; remove the fire, allow the mixture to settle, and draw off the clear liquor.—2. In another boiler, make a decoction of the catechu, in the remainder of the water; after boiling for 10 minutes, pass the decoction through a fine hair or silk sieve, and add to it the liquor obtained in the previous process; stir the mixture, and keep it in well-stoppered vessels. Mode of application:—The boiler having been well cleaned, introduce through the man-hole, as soon as the boiler is half-filled with water, a ½ lb. of the resinous double subcarbonate of soda and potash per horse-power every six weeks. The quantity above-mentioned should be introduced every six weeks, by means of the feed pipes, when the steam is low. For marine boilers, introduce 3 lbs. of the preparation every four hours into the boiler for every 100 horse-power, and blow off once in every eight hours. The blowing off should be performed 10 minutes previous to the introduction of the preparation into the boiler.

SHIPBUILDING.—We understand that in the ship market in Liverpool much dissatisfaction prevails as to the build of the small description of four-year class vessels; they have deteriorated both in price and favour. The increased employment of zinc for sheathing has led to the use of iron fastenings, and as zinc is unsuitable for all waters, it limits speculation. The colonial builders also consign vessels to the English markets in a most unfinished state—fastenings insufficient, planking and ceiling badly worked, ground tackle light and short, and the rigging of inferior and second-hand. In some cases 5*l.* per ton has been obtained for such vessels, copper fastened and better finished; the former have brought only 3*l.* 10s., a difference ample to pay for copper and more attention to completeness.

THE "GREAT BRITAIN."—We have already stated that this noble steamship has been purchased for the sum of 18,000*l.* by Mr. Patterson, the eminent shipbuilder of Bristol. It seems that Mr. Patterson purchased her for the well-known firm of Gibbs, Bright, and Co., of Bristol and Liverpool. These gentlemen were the agents at Liverpool for the Great Western Steam-Ship Company, and they are extensively engaged in the passenger and carrying trade between the United States, Australia, the Pacific, and British North America. It is intended that the large engines now on board shall be removed, and new ones adapted. It is not improbable that this "Leviathan" will convey a large number of our Transatlantic friends to view the World's Exhibition of 1851.

SUBSTITUTE FOR THE MARINE GLUE.—An excellent transparent substance, well adapted to replace the marine glue of Jeffrey's for many purposes, particularly where a transparent joint is required, as in the union of pieces of glass, invented by Mr. S. Lenher, Philadelphia, was exhibited at the monthly meeting of the Franklin Institute (September 8, 1850), and its properties explained From its transparency, it was suggested by the Chairman, Mr. G. W. Smith, as admirably adapted for the union of the parts of polyzonal lenses and rings. Small glass boxes, for containing microscopic objects, united by it, were shown, and gave much satisfaction. The composition of the cement is as follows:—Caoutchouc 15 grains, chloroform 2 ozs., mastic half an ounce. The two first-named ingredients are to be first mixed; after the gum is dissolved the mastic is added, and the whole allowed to macerate for a week, which is about the time required for the solution of the mastic in the cold. More of the caoutchouc may be added where great elasticity is desirable. The convenience of its application with a brush, cold, recommends it for approval—*Franklin Journal.*

Copper ore has been obtained from a field at Lee, Ilfracombe. It is said tha the discoveries already made will justify the commencement of mining operations; should the suggestion be acted upon, the future condition of Ilfracombe would be materially affected.

ACCIDENTS.

Bilston.—G. Mills, aged nine years, met a melancholy death at Mr. Pemberton's Colliery; the pit is worked by a horse-gin, and the boy, in play, climbed up into the wooden drum, round which the pit rope is wound by the movements of the horse. Wilkes, the driver, not being aware of this, suddenly started the horse, when the head of the poor lad was caught between the cross beam and the top shrouding of the gin, by which his skull was dreadfully fractured, and he was killed on the spot.

Death by Falling Down a Coal-Pit.—As J. Tuckley, was standing with his back close to the mouth of a coal-pit at Woodfarm Colliery, Bentley, and attending to a fire that he had just made, he suddenly fell backwards into the pit, and was killed.

Ashton.—At Hey's Colliery, Ashton, it has been the custom of the pitmen to ride up and down a gig brow at the bottom of the pit, which is traversed by an endless chain. On Saturday several of the hands were coming up the brow, when one of the links of the chain, which was considered an excellent one, snapped asunder, and several empty and full tubs, with the men who were riding up, were precipitated to the bottom. Several of the men were bruised; and William Miller, was killed, the tail of the chain having in its course struck his head.

A man named Samson was blasting a rock—he had the train laid, but could not get it to ignite; and on going to see the reason it suddenly exploded, blowing the poor fellow up a considerable height. He broke two or three ribs, and was otherwise seriously injured; he is now lying in a precarious state.—*Sherborne Journal.*

Explosion of Gunpowder.—William Barratt, while employed in Messrs. Roscoe and Lord's Colliery, Spotland, near Rochdale, was carrying a can containing some gunpowder used for blasting purposes at the mine, when another boy was also carrying a can containing gunpowder, and they agreed to pour the powder contained in one can into the other, in doing which a small quantity was scattered upon the floor of the pit. One of the boys very thoughtlessly took a lighted candle to ignite the small quantity that was scattered, which immediately exploded, and communicating with the can, which contained nearly half a gallon of powder, produced most terrible results. One of the boys was so severely injured that he died shortly after the accident. Barratt had his leg almost blown off, and was otherwise injured, and after lingering some days, died.

Sutton Colliery.—An engineman fell down the Glade-hill shaft and was killed.

CORNISH STEAM-ENGINES.

[Abstract from Browne's *Cornish Engine Reporter*, from Nov. 20 to Dec. 20.]

PUMPING-ENGINES.

Number reported			28
Average load per square inch on the piston, in lbs.			13·4
Average number of strokes per minute			5·1
Gallons of water drawn per minute			3010
Average duty of 20 engines—being million lbs. lifted 1 foot high, by the consumption of 1 cwt. of coals			65·4
Actual horse-power employed per minute			1071·8
Average consumption of coals per horse-power per hour, in lbs.			3·7

ROTARY-ENGINES—WHIMS.

Number reported			20
Number of kibbles drawn			85,247
Average depth of drawing, in fathoms			132·2
Average number of horse-whim kibbles drawn the average depth, by consuming 1 cwt. of coals			49·5
Average duty of 13 engines, as above			18·6

STAMPS.

Number reported			7
Average number of strokes per minute			10·6
Average duty of 5 engines, as above			42·6
Actual horse-power employed per minute			173·5

PUMPING-ENGINES DOING HIGHEST DUTY.

Par Consols	80-inch single	*Millions*	100·8
Fowey Consols	80-inch single		100·7
Great Polgooth	80-inch single		94·2
Stray Park	60-inch single		83·8
West Fowey Consols	60-inch single		83·3
Par Consols	72 and 36-inch Sims's combined		80·4
Callington	50-inch single		72·3
North Pool	50-inch single		70·9

WHIM-ENGINES.

Fowey Consols	22-inch double	*Millions*	29·6
Fowey Consols	22-inch double		26·7
Par Consols	24 & 13-inch Sims's combined		25·6
Par Consols	24-inch single		24·2
Great Polgooth	22-inch double		20·5
Trelawny	24 & 14-inch Sims's combined		20·0

STAMPING-ENGINES.

Tincroft	36-inch double	*Millions*	55·4
Great Polgooth	35-inch double		51·8
Tamar	30-inch double		47·0

COMPANIES PROCEEDING UNDER THE WINDING-UP ACT

The following is a list of the companies now under the operation of the Winding-up Act, in connexion with which calls have been made to defray liabilities—

Banwen Iron Company.
Godolphin Mining Company.
Kilbricken Silver-lead Mining Company.
Nister Dale Iron Company.
Northern Coal Mining Company.
Boston and Thorp Arch Bath Company.
Kingsland, Dalston, and De Beauvoir Town Literary and Scientific Institution.
Kollman's Carriage Improvement Company.
National Disinfected and Dry Manure Company.
North of England Joint-Stock Banking Company.
St. George's Steam-packet Company.
Direct Birmingham, Oxford, and Reading Railway.
Direct Exeter, Plymouth, and Devonport Railway.
Direct West End and Croydon Railway.
Galway and Ennis Grand Junction Railway.
Grand Trunk and Stafford and Peterborough Railway.
Irish West Coast Railway.

It is calculated that between 100,000*l.* and 200,000*l.* have been, or are being, collected in the shape of calls under these estates to pay off creditors and outstanding liabilities. The only railway under the Winding-up Act in which a dividend has been declared at present is the Tring, Reading, and Basingstoke.

WHEAL CONCORD.—Sir W. Horne has appointed Friday, the 17th inst., for the further settlement of the list of contributories of this company under the Winding-up Act.

BRITISH AND FOREIGN GASLIGHT AND METER COMPANY.—Creditors are to come in and prove their debts.

NATIONAL LAND COMPANY.—An Act is to be applied for in the ensuing session for "dissolving" this company.

DIRECT BIRMINGHAM AND OXFORD RAILWAY.—Vice-Chancellor Rolfe has appointed the first day in the ensuing term for delivering judgment on the appeal of Capper in this Company, which, short of the decision of the House of Lords, will settle the great question of the liability of allottees in railway and joint-stock companies. His Lordship has at present intimated that his impression is in favour of the non-liability of allottees in unformed companies, who have not paid any deposit or done any act after making application for shares, but his Lordship has sent for all the papers, and reserved his formal judgment, intimating to Mr. Capper's counsel that if anything occurs to change his opinion he will hear him in reply before giving judgment. Should it be eventually decided that mere allottees are not liable, it will release from the lists between 1000 and 2000 persons in the Direct Birmingham and Oxford Railway, and consequently several thousand persons who were mere applicants for shares during the mania of 1845.

MIDLAND UNION.—Master Tinney has appointed Mr. Harding to be official manager for winding up this company's affairs, on the petition of Mr. T. Macaulay, of Leicester, and Mr. C. H. Bracebridge, of Atherstone, who state that it was projected with a capital of 750,000*l.*, in 37,500 shares of 20*l.* each. The line was to be an extension of the existing North Staffordshire Railway from Uttoxeter, to unite the Leicester and Bedford, and South Midland Railways, so as to secure the best practicable line from London to Manchester and Liverpool. The total shares allotted amounted to 56,635, whereof 12,600 were allotted to the provisional directors. The petitioners had 500 each; and the former petitioner, Mr. Macaulay, alleges that he has been sued individually by creditors, and paid out of pocket upwards of 1000*l.*, on behalf of the liabilities of the company, the expenses incurred on behalf of which are alleged to amount to nearly 80,000*l.* Only 609*l.*, it appears, was ever paid on account of the 2*l.* 2s. deposit; no deposits were paid by the directors, and no more than 290 shares out of the 56,635 were taken up. It was proposed that 2s. per share should be paid to meet the liabilities, but the allottees of only 2895 shares responded to the call in this respect, which was found to be totally inadequate to discharge the company's engagements, although some of its directors, for that purpose advanced 100*l.* each.

In connection with the work of winding-up joint-stock companies, there is a case in one of the courts of an official manager giving evidence as former secretary against the company he is winding-up, and of another official manager appearing on the lists of contributories in more than one ill-starred undertaking. It is found by the Masters in Chancery, on whom, in addition to the transaction of the business of ordinary suits, devolves the winding-up of 10 companies a piece, each of which is more than equivalent to three or four individual cases in the Court of Bankruptcy, that these proceedings greatly embarrass the ordinary business of the courts, in respect of which all the suitors of the Court of Chancery pay, while the payments in respect of the winding-up of these companies, in lieu of fees, to the suitors' fee fund, are merely nominal. The first joint-stock company likely to be completely wound up under the Act is the Wheal Curtis Mining Company, the proceedings for the settlement of the affairs of which were commenced in January, 1849, so that nearly two years will have been consumed in winding-up this company's affairs, the liabilities amounting only to between 3000*l.* and 4000*l.*

PARLIAMENTARY APPLICATIONS FOR BILLS IN THE ENSUING SESSION.

From the returns made by Mr. Hawes, the Registrar of the Private Bill-office of the House of Commons, of the applications in connection with joint-stock undertakings, deposited up to the 31st December, the last day allowed by the standing orders, it appears that the total number of applications for the ensuing session, for all classes of bills, amounts to 216, about one-half for railways, and the other half for miscellaneous companies, showing that the joint-stock enterprise of the country is by no means daunted by the dramas now daily enacting under the Joint-stock Companies' Winding-up Act. There are the following applications for new water companies:—Metropolitan Water Supply Association, for the control of the representative body; Wandle Water and Sewerage Company, London (Watford) Spring Water Company, Metropolitan Waterworks (Henley-on-Thames and London Aqueduct), East Lancashire Water-works, Cambridge Water-works, Leicester Water-works and Sewerage, St. Helen's Water-works, Whitby Water-works, East Stonehouse Water-works.

There are five applications for new electric telegraph companies—The United Kingdom Electric Telegraph Company (Allen's patent), the European and American Printing Telegraph Company (Jacob Brett's), the Submarine Telegraph Company between Great Britain and Ireland (J. Brett's), the Submarine Telegraph Company between England and France, and the Magnetic Electric Telegraph Company. The Electric Telegraph Company also apply for amendments of their present Acts.

There are several applications for the municipal and other improvements of Liverpool and Manchester. The Great Central Gas Consumers' Company apply for an incorporation of their company. There are also several applications for local gas companies. To supersede the "Smithfield nuisance," measures are proposed called the "Railway Insurance Cattle Market," and the "Metropolitan Cattle Market," the object of the latter being the removal of Smithfield and Newgate markets, and the prohibition, intramurally, of slaughter-houses. The maintainers of Smithfield as it is also have a bill, entitled "Smithfield Enlargement," one of the objects being the removal of the dead meat market from Smithfield, and the levying of tolls, stallages, and dues for the proposed purpose.

MID KENT RAILWAY (LANDOWNERS' LINE).—The bill for constructing this line on the novel principle of a public highway, under the direction of a board of public commissioners and auditors, has been deposited at the Private Bill-office. The petitioners for the Bill are 600 of the landowners along the line.

CHARING-CROSS BRIDGE COMPANY.—This company is about to seek powers for "raising additional capital."

SOUTH AUSTRALIA.—Papers to the 27th Sept. have been received. Several further arrivals of emigrants are reported, whose passages appear to have been made with comfort. Burra Burra mining shares were quoted 206*l.* (cash); Princess Royal, 21*l.* (cash). Money continued to fetch 15 per cent. on good security. Bills on England, at 30 days, were 1 per cent. premium; and at 90 days, 3½ per cent. premium. Gold commanded a premium of 2 per cent.

CALIFORNIA.—From the latest intelligence, we learn that the cholera had committed serious ravages, but at the last dates was abating. Gold digging had not been very productive during the season, but from the number of diggers the aggregate amount was large. The great reduction in provisions had enabled many to reap a tolerable reward for their labour. It is said that much attention is being paid to quartz mining, and that the Mariposa mines are yielding a good return for the labour. There are rumours of discoveries of rich auriferous quartz between the South Fork of Feather River and the North Fork of the Yuba; an assay, it is stated, gave 37½ cents to the pound of quartz, giving about $750 per ton. On the Stanislaws, a sudden rise of the water carried away nearly every work which had been constructed, and the labour of 4000 men for three months was destroyed. According to the advices by the *Cherokee* steamer, $2,000,000 worth of gold arrived with her in New York. A new and simple machine is said to have been introduced, which will produce double the quantity of washed gold dust in a given time than the old rocker.

BRITISH SPELTER.—We understand that it is in contemplation to erect shortly new works, on an improved and economical principle, for the manufacture of zinc, at or near Brymbo, near Wrexham, Denbigshire—it being considered that an abundant supply of black jack and calamine can be obtained from the Miners, and other mines in the neighbourhood, for their use.

It will be seen, from our advertising columns, that a company has been formed for working the rich and valuable hematite mines at Auchenlech, near the head of Balcarry Bay, in the Solway Firth. From the great and increasing demand for hematite by all the leading iron manufacturers in the kingdom, there is every prospect of it being a lucrative undertaking. As these mines are free from the uncertainty which attends the working of other minerals, and as very large fortunes have been realised by the fortunate holders of the few deposits of the ore which exist, the present opportunity of investing in a mining adventure is one which presents advantages rarely to be met with.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

CONDURROW.—We have a considerable improvement in our 80 fathom level east, on Robert's lode—a very fair course of yellow copper ore.

At NANCEGOLLAN, they are getting on rapidly with clearing out the mine.

DARTMOOR FOREST.—This mine is about midway between Buckfastleigh and South Brent, on the river Avon, and has been at work by the present company six months. Much was done here about 10 years ago, when several tons of tin were returned, and powerful machinery erected, when a dispute about title put a stop to operations, and everything was sold. I was working in the mine at the time, and was one of a pare of men who broke 2 tons of tin from the lode in 7 ft. of ground, at a depth of 14 fms. from surface, which sold for 56*l.* per ton. William Easterbrook, of Runnaford Coombe, who had shares, was one of my partners. It is the richest lode I ever saw in any mine, and will produce abundance of tin. A lode, 20 fms. north of this, has been discovered by the present company 2 ft. wide, and a shaft sunk upon it to a depth of 5 fms., where it contains 3 rich leaders, which will produce about a half-ton of tin per fm., worth 50*l.* per ton; and a cross-cut from the adit will intersect this lode at a depth of 15 fms. The engine-shaft is cleared, and the adit for upwards of 100 fms. Active preparations are making for erecting a powerful water-wheel; as soon as this is done, the lode can be fairly opened upon, and large returns of tin will be made.

DEVON WHEAL MARY ANN.—This mine is situate in the parish of Bridestowe, and held under a lease from John Gubbins Newton, Esq., of Bridestowe, at 1-15th dues. It comprises an extent of sett bounded on the east by the River Lyd for upwards of a mile in length on the course of the lodes west, and about three-quarters of a mile from north to south. The facilities for mining this ground are such as are rarely met with—being a combination of hills and valleys to the height of from 40 to 50 fms. on the course of the lodes. The River Lyd brings a never-failing stream of water, available for all mining purposes, which is also greatly in its favour. The operations already carried on are—first, a shallow adit level driven west about 7 fathoms, where some splendid rocks of copper ore were risen, producing on analysis 10½ per cent. Since which a deep adit level has been driven north at the foot of the hill, and the lode intersected at a depth of 45 fms., when driven under the highest part of the hill in a westerly direction the lengthway of the sett—the cross-cut being taken up near the western extremity. We have driven about 3 fms. west on the course of the lode, which is of a most kindly description, varying in size from 2 to 4 ft., composed of peach, prian, spar, mundic, capels, and good spots and stones of copper ore of a good quality. As before stated, the point at which our operations now are is upwards of a mile on the lode's course. We have also shoded in the western part of the sett for lead lodes—three of which have been discovered; one in particular of a most kindly description, about 2 feet wide, composed of mundic, flookan, spar, and spots of lead; but the whole having been but imperfectly tried, their capabilities cannot as yet be fairly spoken of. It is generally supposed that this property contains a great amount of mineral both of copper and lead; and it is believed that a rich lead lode remains yet to be discovered, from the fact that rich stones of that mineral have been found loose on the surface.

NAP DOWN SILVER-LEAD MINE.—This mine is situated in the parish of Combmartin, near Ilfracombe, on the north coast of Devon, on the Bristol Channel, being one of the setts worked by the old Combmartin Mining and Smelting Company. The silver-lead mines of this part of Devonshire are of very ancient date, and many historical and traditionary anecdotes relative thereto have at various times been inserted in the *Mining Journal*. They have been worked at various periods in the reigns of Edward I., Edward III., Henry V., and Elizabeth. The sett comprises about 1200 acres, granted for a term of 21 years, at 1-15th royalty. An engine-shaft is already sunk to a depth of 40 fms., a cross-cut driven north-east 25 fms., and three lodes cut, on which pitches can be immediately set. These mines were worked to much advantage in the thirteenth century; in 1860 a writ was issued, authorising the impressment of miners at fair wages for the Crown service. In the reign of Elizabeth 800 men were pressed from Derbyshire to work them. In 1813 they were again opened and worked for four years, producing in that time only 208 tons of ore. In 1837 they were again worked, but Mr. De la Beche, who examined them, remarked on the unskilfulness of the former management. Although the old company had erected a steam-engine, sunk a shaft, and driven a level at that depth, where they cut a very rich lode, from which in 16½ fms. they raised 1000*l.* worth of ore, and also cut a copper lode worth 30*l.* per ton; they got into difficulties, and the mine was abandoned. In consequence of the cost of sinking the shaft, and having paid away their profits in large dividends, without retaining a reserve fund, a heavy call was made, which was not responded to, and finally the machinery was sold off, and the lease given up. Notwithstanding the difficulties under which the old company laboured, they raised and sold during their recent working upwards of 47,000*l.* worth of ore; and, according to the report of Capt. James Carpenter, and from other authorities, there is every reason to expect that this mine will turn out almost unprecedentedly rich in depth. An extraordinary discovery has lately been made by shoding on the back of the main lode; at a depth of only 7 feet no less than 10 tons of solid silver-lead have been raised in blocks of from 1 to 8 cwts., and around these nodules is a rich mineralised ore, producing from 1000 to 2000 ozs. of silver to the ton of ore; this is noticed as an extraordinary characteristic, and not as anything to depend on. The mine is divided into 3000 shares, of 2*l.* each, deposit 1*l.* per share.

THE UNITED MINES (Tavistock).—This undertaking is being proceeded with vigorously, and men are actively engaged in putting the shaft in good working order; and the machinery, which is excellent, is being overhauled, and some improvements made, under the inspection of Messrs. Hocken and Loam, the engineers.—*Plymouth Journal.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 14—Buddle's West Hartley 14 6—Carr's Hartley 14 3—East Adairs Main 12 6—Holywell 15 6—North Percy Hartley 14—Ord's Main 14 6—Ravensworth West Hartley 14—South Pearth 13—Tanfield Moor 13 6—Tanfield Moor Butes 13 3—Townley 14—Walker Primrose 12 6—West Hartley 14 6—West Wylam 14—Wylam 14 6—Wall's End Acorn Close 14 9—Hotspur 14 6—Hedley 15 3—Lawson 15—Northumberland 14 6—Original Gibson 14 6—Braddyll 16 6—Hetton 17—Lambton 16 9—Richmund 16—Russell's Hetton 16 6—Scarborough 15 6—Stewart's 17—Whitwell 15 6—Hartlepool 17—Heseldon 15 3—Kelloe 16 6—South Hartlepool 16 6—Thornley 15 9—Brown's Deanery 15 9—Maclean's Tees 14 9—Seymour Tees 15—Vernon Tees 15 3—Birchgrove Graigola 19—Cannell 22—Cowpen Hartley 14 6—Hartley 13 6—Hetton Small 10 6—Kilmarnock Best Steam 13 6—Nixon's Merthyr and Cardiff 21—Sydney's Hartley 14 3.—Ships at market, 350; sold, 66.

WEDNESDAY.—Carr's Hartley 14—Davison's West Hartley 14—Holywell 15 6—North Percy Hartley 14—Ravensworth West Hartley 14—Tanfield Moor 13 6—Tanfield Moor Butes 13 3—West Hartley 14—West Wylam 13 6—Wylam 14 6—Wall's End Acorn Close 14 9—Braddyll 16 6—Haswell 17—Richmund 16—Stewart's 17—Heugh Hall 15 9—Kelloe 16 6—Whitworth 13 6—Adelaide Tees 16—Cowpen Hartley 14—Derwentwater Hartley 14—Hartley 13.—Ships at market, 327; sold, 30.

FRIDAY.—Bate's West Hartley 12 9—Buddle's West Hartley 13 6—Carr's Hartley 13 6—Davison's West Hartley 14 9—East Adair's Main 12—North Percy Hartley 12 9—Ravensworth West Hartley 14—South Pearth 12 6—Tanfield Moor 13 6—Tanfield Moor Bate's 12 3—Walker Primrose 12—West Hartley 13 6—Wylam 14 6—Wall's-End Bewicke and Co. 15 6—Hedley 15—Eden Main 15 9—Braddyll 16 6—Hetton 17—Haswell 17—Richmund 16—Scarborough 15 6—Cassop 16—Hartlepool 17—Kelloe 16 6—South Hartlepool 16 6—South Kelloe 16—Thornley 15 9—Whitworth 13—Cowpen Hartley 13 6—Hartley 13.—Ships at market, 319; sold, 37.

CALEDONIAN RAILWAY—ELECTION OF CHAIRMAN.

SIR,—My attention has been called to a paragraph in the *Morning Herald* of Monday last, in reference to the retirement of the three London and North-Western directors from the Caledonian board, and the election of John Duncan, Esq., to the chairmanship, I request the favour of your insertion of the following remarks:—The three directors first named were called upon to resign by a minute of the London and North-Western board, in consequence of the refusal on the part of the guaranteed lines to accept the liberal scheme of adjustment proposed by the negotiating committee, composed of those three gentlemen, and of three other members of the Caledonian board, of whom Mr. Duncan was one. Mr. Duncan, who is *not* a solicitor of Edinburgh, as stated in the *Morning Herald* of Monday, but an eminent advocate of Aberdeen, and law agent of her Majesty, holds a large stake in Caledonian ordinary stock *only*. He joined the board in February last when the original directors resigned, and has been distinguished by his determined defence of the ordinary shareholders, by his persevering attempts to arrange with the guarantees on fair terms, and by the marked esteem of his colleagues.

So far from his appointment being likely to be unacceptable to the English shareholders, as hinted at in the *Morning Herald*, they have every reason to congratulate themselves on the acceptance of the chair, *after much pressing*, by a Scottish director—so energetic, so talented, and so staunch to their interests as Mr. Duncan, whose election was moved and seconded by English directors, and carried unanimously.

I may add that the Caledonian board have lodged a *permissive* parliamentary bill, for the purpose of legalising any settlement with the guaranteed and preferential interests which may be mutually agreed upon.

The following editorial paragraph, extracted from the *Aberdeen Journal*, of Jan. 1st, which is the leading newspaper of the north of Scotland, will show the estimation in which Mr. Duncan is held in his native country, and the City of Aberdeen:—

"CALEDONIAN RAILWAY.—We have much satisfaction in stating, that our townsman, Mr. John Duncan, 'advocate,' a director of the Caledonian Railway, has been raised to the office of chairman of that important company; and we hesitate not to say that we consider the shareholders fortunate in having obtained the services of a gentleman whose talents so well fit him for discharging in its present, or under any circumstances, the very arduous duties of that office."

I am, Sir, your obedient servant, 58

London, Jan. 3, 1851. AN ENGLISH DIRECTOR, CALEDONIAN RAILWAY.

New Patents.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

G. E. Dering, Esq., of Lockleys, Herts, for improvements in the means of, and apparatus for, communicating intelligence by electricity.

J. R. St. John, of New York, America, engineer, for improvements in the construction of compasses and apparatus for ascertaining and registering the velocity of ships or vessels through the water.

A. V. Newton, of Chancery-lane, Middlesex, mechanical draughtsman, for improvements in the construction of metal shutters.

C. Merronti, of Rue de la Paix, Paris, gentleman, for certain chemical compositions for rendering cotton, linen, woollen, silk, and other fabrics impervious to water, and fixing colours in dyeing.

W. H. Jones, M.A., of Queen's College, Oxford, and of Chorley, Sussex, clerk, for improvements in apparatus to be used when burning candles.

T. S. Prideaux, of Southampton, gentleman, for improvements in generating and condensing steam, and in fireplaces and furnaces.

J. and J. N. Slater, of Dunnes, near Bolton, Lancaster, bleacher, for certain improvements in machinery or apparatus for the purpose of stretching or opening textile or woven fabrics.

J. M. Fraser, of Mark-lane, London, merchant, for improvements in the manufacture of sugar.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Whitehouse and Son, Birchall-lane, Birmingham, roller blind furniture.

The Hon. W. E. Fitzmaurice, Princes-gate, Hyde-park, metallic cloth and towel horse.

T. R. Gardener, Buchanan-street, Glasgow, draining level.

J. Keyse, Cross-street, Newington Butts, apparatus for saving lives from drowning.

Casper and Waters, Regent-street, the "Sottanello."

J. Iuderwick, Princes-street, Leicester-square, stem for tobacco pipe,

Lewis and Allenby, Regent-street, stella parasol.

W. Richardson, Romford, Essex, spring hat lining.

G. Marshall, William-street, Regent's park, door guard.

J. T. Bewes, Strand, life boat.

C. Lamport, Workington, steering apparatus.

W. Middlemore, Birmingham, mounting rein.

G. Holcroft, Manchester, steam-boiler.—*Patent Journal.*

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Dec. 28, was—No. of passengers, 25,553.—Amount of money, £106 9s. 5d.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [January 4, 1851.]